

FIFTEENTH YEAR ANNUAL REPORT

INTERSTATE POLLUTION CONTROL/ROTO-ROOTER SUPERFUND SITE
Winnebago County
Rockford, Illinois

Prepared for:

Interstate Pollution Control/Roto-Rooter Superfund Site Remedial Design/Remedial
Action Steering Committee

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1.0 INTRODUCTION

This Fifteenth Year Annual Report (“report”) was prepared by Environmental Information Logistics, LLC (EIL) on behalf of the Interstate Pollution Control/Roto-Rooter (“IPC”) Superfund Site Remedial Design/Remedial Action Steering Committee. This report discusses the results of long-term natural attenuation monitoring for the December 2021 monitoring event for the current monitoring period (July 2021 through June 2022), and satisfies the requirements of the IEPA-approved Groundwater Monitoring Work Plan (“GWMP”), dated March 1, 2006, the IEPA-approved First Year Annual Report/Technical Memorandum (“Tech Memo”), dated August 28, 2008, and the Consent Decree (with Appendix B – Statement of Work (SOW)) with the State of Illinois, dated March 1, 2006.

The November 8, 2005 Consent Decree was implemented following decades of contaminant removal actions that occurred at the site from the 1970s through the 1990s. In general, the Consent Decree required the installation of an asphalt cap at the site, installation of monitoring wells, the implementation of institutional controls, and groundwater monitoring until groundwater quality at the site was restored to MCLs. To date, all of the requirements have been completed with the exception of the ongoing groundwater monitoring.

The IEPA-approved GWMP was prepared as part of the groundwater monitoring obligation at the site. Section 6.0 of the GWMP states the following:

“Annual reports will be prepared and submitted to the IEPA within 45 days of completing each second semi-annual groundwater sampling event (except in years 1, 5, 10, 15, etc., as discussed above and below). Each of the annual reports will include a summary of groundwater data collected during the past year and will include an evaluation, based on the IEPA-approved statistical methodology, of the source of any statistically significant changes to groundwater quality. Where appropriate, the annual report may also recommend changes to the statistical methodology for future monitoring events.”

Section 6.0 of the GWMP also states the following:

“Five-year review reports will be submitted to the IEPA within 45 days of completing the second semi-annual sampling event at the end of each five-year cycle. Each five-year review report will include a cumulative summary of the results of statistical analysis of that data, and an evaluation of the source of any statistically significant changes to groundwater quality.”

In a letter dated November 1, 2021, the IEPA agreed to annual sampling (beginning in the 15th year of monitoring). Therefore, starting in this 15th year of monitoring, sampling will occur once per year in December.

This is the fifteenth annual report prepared since natural attenuation groundwater monitoring began at the site.

1.1 Site Description and Background

1.1.1 Site Description

The Interstate Pollution Control Inc. (IPC) site (“the site”) is located in an industrial area in the south central part of Rockford, Winnebago County, Illinois north west of Magnolia Peoples Avenue, as shown on Figure 1. The small (approximately 2.8 acre), irregularly-shaped site measures approximately 850 feet long along the north boundary line and 270 feet along the east boundary line. The site is surrounded by numerous industrial facilities. A Site Vicinity Map is included as Figure 2 and a Site Layout Map is included as Figure 3.

During IPC’s operation of the site it contained, at various times, at least six underground storage tanks, one large above-ground storage tank, an unlined surface impoundment, a gas fired incinerator, and several structures. IPC’s operation at the site included transporting and bulking of waste oils, solvents and cyanide waste for incineration, resale and/or off-site disposal. Also during IPC’s operation of the site, support service was provided to two sister companies; a portable toilet business and a Roto-Rooter franchise. Prior to IPC’s operations, the site was extensively quarried and backfilled with various materials including a large quantity of foundry sand. Following filling of the quarry and immediately prior to IPC’s operations, the site was the location of an auto salvage yard.

In 1991, private parties negotiated a Partial Consent Decree with the Illinois EPA and the Attorney General of the State of Illinois. The Partial Consent Decree required that the private parties (“Respondents”) undertake a Remedial Investigation/Feasibility Study (“RI/FS”) at the site. The RI Work Plan was completed in 1992, and the field investigations were conducted in 1993-1994. The final RI Report was submitted in 1997.

Significant removal actions occurred at the IPC site on two different occasions. The incinerator was removed between 1976 and 1979. IPC conducted partial cleanup of the site in 1979 and 1980, in response to an Illinois Pollution Control Board Order. During this partial cleanup of the site, several bulk tankers containing wastes, approximately 180 yds³ of material from the surface impoundment, and approximately 120 yd³ of cyanide-contaminated soils were removed. Reportedly, 1,200 drums of contaminated materials were also removed from the site during this cleanup. The surface impoundment was backfilled and graded.

On August 6, 1991, the U.S. EPA issued a Unilateral Administrative Order (“UAO”) to IPC and the Respondents to conduct additional removal activities at the site. Beginning in 1992, the Respondents to the UAO fenced the site, removed over 1,400 tons of solid and hazardous waste (including visibly stained soils), demolished and removed all above-ground and underground tanks and significant structures, installed a clay cover over the former impoundments, and substantially cleared the site.

These removal actions eliminated more than 2.9 million pounds of solid and hazardous waste. These materials constituted principal threats at the site and were removed, treated, destroyed, or disposed of prior to the initiation of the RI/FS.

1.1.2 Constituents of Concern (COCs)

A total of 73 chemicals of potential concern (“COPCs”) were identified originally in the RI based on previous detections in site soils and were selected for risk assessment. These included 11 volatile organic compounds (“VOCs”), 29 semi-volatile organic compounds (“SVOCs”), 14 pesticide/PCB compounds, 18 trace metals, and cyanide. In addition, a total of 33 chemicals previously detected in on-site groundwater were selected as COPCs. These included 11 VOCs, 10 SVOCs, one pesticide/PCB compound, 11 trace metals, and cyanide. A significantly reduced number of these COPCs were found to be risk drivers, as summarized in the *“Risk Driving Chemicals of Potential Concern”* table from Section V of the ROD.

Based on the previously discussed contaminant removal activities and the installation of the engineered barrier, and as stated in Section 2.4 of the SOW, *“VOCs are the sole constituents of concern”* with respect to long term natural attenuation groundwater monitoring at the site. Section 2.4 of the SOW specifies that *“...groundwater will be sampled for TCL VOC’s only.”* during long term natural attenuation monitoring. In addition, paragraph XII of the Record of Decision (ROD) states *“If during each Five Year Review cycle spastically [sic] significant decreases in on-site and down gradient concentrations of trichloroethene and 1,1,1-trichloroethane in shallow groundwater are not verified (which cannot be attributed to upgradient sources), the SVE design pilot test will be implemented.”*

Seven VOCs were detected in site monitoring wells during the background data collection period and as reported in the August 28, 2008 First Year Annual Report/Technical Memorandum. These included:

- 1,1,1-trichloroethane;
- 1,1-dichloroethane;
- 1,1-dichloroethene;
- cis-1,2-dichloroethene;
- tetrachloroethene;
- trichloroethane; and
- vinyl chloride.

However, only four VOCs were proposed originally as site-specific COCs for long-term groundwater quality evaluation. Three VOCs, 1,1-dichloroethane, vinyl chloride, and cis-1,2-dichloroethene, were specifically not proposed as COCs because they were generally detected at elevated concentrations in downgradient monitoring wells and because there was, and continues to be, strong evidence to suggest that the downgradient concentrations were, and continue to be, biased due to an off-site source (i.e., landfill gas from the adjacent Peoples Avenue Landfill). However, IEPA’s approval of the August 28, 2008 First Year Annual Report/Technical Memorandum was conditional based on the inclusion of all seven VOCs as COCs. Therefore, all seven of the VOCs detected during background data collection and as listed above are evaluated herein as COCs.

1.1.3 Extent of Groundwater Impacts

Remedial investigation activities were conducted at the site to evaluate the nature and extent of contamination, and to assess environmental impacts. Detailed results are provided in the *Final*

Remedial Investigation Report, Interstate Pollution Control Inc. Site, Rockford, Illinois (Golder Associates Inc., December 1997). In general, site groundwater was found to be impacted with numerous organic and inorganic constituents from a combination of past site activities and from a number of upgradient sources. Some of the upgradient sources are being addressed under various regulatory actions and it appears that some are not. In addition, landfill gas from the adjacent Peoples Avenue Landfill was detected on-site and was identified as another possible source of VOCs in groundwater.

The site is located adjacent to the much larger Southeast Rockford Groundwater Contamination (“SER”) site. The SER site began with the discovery of VOCs in groundwater within a residential area of nearly two square miles. The discovery prompted the USEPA to extend water mains and connect 526 residences to City water at a cost of approximately \$4 million. The SER site was then added to the National Priorities List (“NPL”). After further IEPA study, the SER site was expanded to a ten square mile study area (“SER Study Area”) that incorporates almost 20 percent of the City, and which includes the IPC site. Studies have since indicated the widespread presence of chlorinated solvents in groundwater within this ten square mile area, in concentrations varying from less than 10 ppb to over 10,000 ppb.

The SER ROD defines the boundary of the SER Site by the 10 ppb chlorinated VOC plume that extended to approximately 1,200 feet southeast of the IPC site at its closest point (as of 1993). It was reasonable to expect that parts of this plume would expand to the extent that it would affect groundwater beneath the IPC site. It appears that the plume arrived at the upgradient site monitoring wells several years ago and is affecting groundwater quality at IPC.

As discussed in the 1999 site ROD, there are/were also a number of other known groundwater contaminant sources located near the IPC site. For example, the former Mattison Machine Works is located approximately 1,000 feet to the northeast (i.e., upgradient) (Figure 2). Previous studies at Mattison Machine Works dating back to 1993 indicate that a plume containing PCE (up to 10,600 ug/L), TCE (up to 1,500 ug/L), and 1,1,1-TCA (up to 800 ug/L) is/was passing under that facility. These concentrations are much higher than are in groundwater at IPC.

In addition, the Peoples Avenue Landfill, located immediately southeast of IPC (Figure 2), was previously identified as the likely source of groundwater contamination that contributed to the deterioration of groundwater quality in one of the City of Rockford’s public supply wells (Municipal Well No. 14), ultimately resulting in the abandonment of the supply well in 1971, prior to operations at IPC. The Peoples Avenue Landfill is also a known source of landfill gas (including methane) migration that previously entered the basement of the former Quaker Oats pet food manufacturing plant, located just southwest of the IPC site. And, as reported previously, there is evidence to suggest that landfill gas has already impacted site monitoring well MW-4, which is located between the IPC site and the Peoples Avenue Landfill (Figure 3).

While remedial actions associated with some of the known sources within the SER Study Area are presently on-going, the IEPA and U.S. EPA have not specifically addressed some of the known groundwater contamination sources near to and upgradient of the IPC site (e.g., Mattison Machine Works). As indicated in the RI report and in the ROD, some of these sources contain elevated concentrations of VOCs, some of which are/were higher than those measured on-site.

As noted in the ROD,

“One of the most notable outcomes of the groundwater portion of the [RI] investigation was verification that a plume of chlorinated volatile organic compounds, at substantially higher concentrations than occur on site is approaching the site from the north east. The plume is expected to reach the IPC site in 15 to 45 years.”

This is significant because, given that the RI data collection activities were completed by 1994, the “plume” would have possibly reached the site as early as 2009, resulting in degradation of site groundwater quality that is completely unrelated to the performance of the selected remedy and which could be attributed mistakenly to the site. As such, the interpretation of the results of long term natural attenuation monitoring must take into account the potential for groundwater quality degradation due to off-site sources. This approach reduces the possibility of incorrectly concluding that the selected remedy is insufficient and that the remedy must be supplemented with soil vapor extraction.

In fact, and as discussed in the First Year Annual Report/Technical Memorandum, subsequent annual reports, and the Five Year Review Reports (in 2010, 2015, and 2020), an upgradient plume appears to have arrived at the site. This was acknowledged in an October 22, 2012 IEPA letter which stated:

“Based on the data in the report [Five Year Review Report], it appears that an upgradient plume may have arrived at the site and the down gradient concentrations of the contaminants mentioned above [trichloroethene and 1,1,1-trichloroethane] are decreasing.”

While the source of the plume is unknown, it is likely that it is the same one previously reported under the Mattison Machine Works property, and it is possible that the SER Site plume has also expanded to the extent that it now affects groundwater quality at the IPC site. Regardless of the source, it is reasonable to expect that the plume will continue to migrate through the site until such time that the upgradient sources are either removed or isolated, eventually affecting the three downgradient site monitoring wells, and ultimately the two river wells. In fact, there is evidence to suggest that this has already occurred.

1.2 Groundwater Monitoring Network

The current groundwater monitoring network consists of eight groundwater monitoring wells, including six site wells (MW1 to MW6) and two “River Wells” (MW8 and MW9) that are located southwest of the site, adjacent to the Rock River. The locations of these wells are shown on Figure 3.

Site wells MW1 to MW6 are screened at a depth of approximately 60 feet within the shallow sand and gravel aquifer. Both regional and local groundwater flow in this aquifer is generally from northeast to southwest, towards the Rock River. This is consistent with groundwater contour map prepared from groundwater elevation data collected during the December 2021 monitoring event, included as Figure 4. Based on this groundwater flow direction, monitoring

wells MW3, MW5, and MW6 are generally on the hydraulically upgradient perimeter of the site. The remaining three monitoring wells, MW1, MW 2, and MW4 are generally on the hydraulically downgradient perimeter of the site.

It should be noted that the site wells were never surveyed to mean sea level. Instead, they were surveyed to a common site datum. As such, the groundwater flow lines accurately depict flow direction, but they are referenced to the site datum, not to mean sea level.

River Wells MW8 and MW9 were installed at the locations shown and to a depth of approximately 19 feet in March 2009, in accordance with the Consent Decree. Based on current groundwater flow conditions, both river wells are hydraulically downgradient of the site.

The two river wells were installed in March 2009 and background data collection was completed following the fourth quarter 2009 sampling event. The results of the river well background data collection and the calculated COC standards were provided to the IEPA on June 1, 2010. This report includes data collected during this reporting period (December 2020 through June 2021).

1.3 Statistical Evaluation Plan and Methods

As noted above and illustrated in Figure 2, the site is located in a heavy industrialized area and several of these industrial properties that are located adjacent to and upgradient of the site have known VOC releases to groundwater. These off-site sources were anticipated to present a challenge for groundwater monitoring at the site - how to determine if COC concentrations at the site are the result of site materials or from off-site sources that migrate onto the site. In order to address this challenge, a statistical evaluation approach was developed to evaluate the ongoing groundwater monitoring data.

A statistical evaluation plan (STEP) was prepared as part of the IEPA-approved August 28, 2008 *First Year Annual Report/Technical Memorandum*. The approved STEP included a combination of interwell and intrawell analyses to evaluate site groundwater data. Interwell analysis compares data from compliance (i.e., downgradient) wells against a background set of data pooled from the upgradient wells. Intrawell analysis, on the other hand, compares the data from each well against a background data set from each well's historical data. The STEP was also designed with flexibility to allow for periodic adjustments to account for off-site impacts and to minimize the possibility for non-site related statistical failures.

Background groundwater quality data collection was performed from four consecutive quarters (3Q07 through 2Q08) at the six site monitoring wells (MW1 to MW6) in accordance with the ROD, SOW, and IEPA-approved GWMP. Background standards were calculated based on the first four quarters of background data collection and subsequently approved by IEPA.

Background data collection was subsequently performed from four consecutive quarters (1Q09 through 4Q09) at the two River Wells (MW8 and MW9). Background standards for the River Wells were calculated based on the background data collection and were subsequently approved by IEPA.

Most STEPs are based on the assumption that there is a single contaminant source. Because there are numerous other documented sources that are affecting site groundwater quality, and because both the upgradient and the downgradient wells were already impacted when natural attenuation monitoring began, there is a greatly increased chance for non-site related statistical failures. Therefore, the approved STEP included a multi-phase evaluation process involving both interwell and intrawell statistical comparisons.

The first phase involves a screening step to evaluate whether or not the upgradient plume is impacting the upgradient site wells. To accomplish this, intrawell prediction limits are used to evaluate each COC in each of the three upgradient monitoring wells (MW3, MW5, and MW6). If there are no “failures”, (i.e., no COC exceedances of the calculated intrawell standards), then we conclude that there are no new off-site impacts affecting site groundwater quality, and the analysis continues with the second phase, discussed below. If there is a COC exceedance of a calculated intrawell standard, then we consider an appropriate course of action. If, for example, only one COC “fails” the intrawell test, then possibly statistical analysis can continue with the second phase not including the failed COC. If, however, numerous or all the COCs fail the upgradient intrawell test, then a revision of the statistical approach, or possibly a recalculation of background standards, is performed. Accordingly, upgradient intrawell standards were revised in 2009 and 2019, as discussed in the annual reports for those years.

The second phase is performed if each COC at each of the three upgradient wells passes the first phase screening. The second phase involves interwell comparisons between each COC in the three downgradient wells (MW1, MW2, MW4, and River Wells MW8 and MW9) with the calculated background standard from the pooled upgradient data. If there are no interwell exceedances, then the conclusion is that there is no site groundwater quality degradation and no further statistical comparison is necessary. If, however, there is a failure based on an interwell comparison, then confirmation re-sampling is performed for the failed COC/well combination(s) in question.

Confirmation re-sampling is performed within 14 days following the receipt of validated laboratory data that indicates a statistical exceedance of an interwell background standard. In general, the results of the confirmation re-sampling are substituted for the original data. If the confirmation re-sampling data are within (i.e., below) the interwell background standard for the COC in question, then the conclusion is that there is no site groundwater quality degradation and no further statistical comparison is necessary. If, however, the re-sampling result “confirms” the original result (i.e., the result exceeds the corresponding interwell background standard), then statistical analysis will continue with the third phase, discussed below.

The third phase is performed if a downgradient well, or wells, fail(s) an interwell comparison to an upgradient background standard. If this occurs, then an Alternative Source Demonstration (ASD) may be performed, if appropriate, to evaluate whether or not an off-site source, such as landfill gas from the adjacent Peoples Avenue Landfill, is possibly impacting site groundwater and is responsible for the downgradient statistical failure. The ASD could involve additional dissolved methane sampling or other investigations/evaluations, to be determined in cooperation with the IEPA. The results of the ASD are included in the appropriate annual report(s). If there

is clear indication that groundwater conditions are deteriorating due to the site, then the implementation of additional remedial measures (e.g., soil vapor extraction) may be considered.

The IEPA-approved STEP includes an allowance for periodic recalculation of background standards (as appropriate) and/or adjustment of the evaluation protocol in order to reduce the likelihood of false positive statistical failure related to the off-site sources. Since contaminant slugs from the upgradient plume continue to migrate through the site, and also due to historical landfill gas impacts from the adjacent Peoples Avenue Landfill, the calculated background standards and statistical evaluation criteria were revised in 2009 and in 2019, as documented in those respective annual reports.

The STEP was modified in 2009 as follows:

- Intrawell background standards were recalculated for 1,1-DCA in MW3 and for PCE and TCE in MW6 to account for the arrival of the off-site (upgradient) contaminant plume.
- Interwell background standards were recalculated for 1,1-DCA, PCE, and TCE in the three upgradient wells to account for the arrival of the off-site (upgradient) contaminant plume.
- A statistical failure at MW4 would hereafter be based on a combined failure of an interwell *and* an intrawell background standard to reduce the possibility of a statistical failure due to landfill gas influences from the Peoples Avenue Landfill.

The STEP was further modified in 2019 to better reflect the ongoing, periodic impacts from off-site sources observed at the upgradient monitoring wells. These modifications included the following revised background standards:

- intrawell background standards for 1,1-DCA in upgradient well MW3;
- intrawell background standards for PCE in upgradient wells MW3 and MW6; and
- interwell background standards for 1,1 DCA and PCE.

The evaluations included in this Annual Report are based on the most recent (2019), IEPA-approved STEP revisions.

1.4 Remediation

The IEPA selected the remedial alternative with the concurrence of the U.S. EPA and after a detailed analysis of the alternatives that were included in the approved Feasibility Study (FS). The selected remedial alternative addresses the principal threats by installation of an impermeable barrier over the site (completed in 2006), placing institutional controls on future site uses, reinforcing existing city and state groundwater use restrictions, and addressing groundwater contamination resulting from the site by implementing a monitored natural attenuation program (which began in September 2007). There is also a contingent remedy that includes soil vapor extraction should the IEPA conclude during the five-year review periods that

site and downgradient groundwater quality has not improved due to continued site releases “which cannot be attributed to upgradient sources”.

An SVE system was not included as an active part of the current remedy for a number of reasons, as discussed in the FS. First, the incremental improvement in reducing VOC migration to groundwater, and therefore in reducing risk to health and the environment, was deemed minimal following the construction of the surface barrier. Second, the treatment efficiency for an SVE system was not quantifiable given the on-going impacts from off-site sources. Finally, there were concerns that an SVE system would induce landfill gas migration from the Peoples Avenue Landfill that would adversely impact the operation of such a system. There were also concerns, discussed with the IEPA during the FS evaluation process, that such landfill gas migration would create a site health and safety issue related to possible explosive hazards.

While there would be potential site health and safety issues associated with managing landfill gases while operating an SVE system, there would likely be other, more significant hazards that could result. For example, if an on-site SVE system were installed, there would be an increased potential for landfill gas to flow from the Peoples Avenue Landfill towards the IPC site. Because that gas would have to migrate across Peoples and Magnolia Avenues, some of it would find its way into various man-made conduits (e.g., underground utility backfill, sewers, etc.). Once in these conduits, the landfill gas would have an opportunity to travel for great distances and in many directions, possibly entering buildings, and thus creating explosion hazards.

Nothing has changed at the site that would alter the first criterion, above. The engineered barrier was installed and is being maintained, effectively eliminating both surface water infiltration and potential exposure to any remaining site contaminants. However, with the predicted arrival of the uncontrolled upgradient plume(s), groundwater quality beneath the engineered barrier is likely to degrade for an unknown period of time.

Regarding the second criterion, if there was formerly an inability to quantify the efficacy of an SVE system given the then-current contaminant loads, then the documented arrival of the off-site plume(s) has further reduced the ability to quantify the efficacy of an SVE system. For example, if an SVE system were installed and operated concurrent with the arrival of the upgradient plume, then it would be likely that the additional contaminant load from the plume would far exceed the remedial effect of the SVE system.

Regarding the third criterion, the potential for an SVE system to induce off-site landfill gas migration appears to be quite real given the documentation showing that groundwater in MW4, located adjacent to the Peoples Avenue Landfill, already contains (or contained) dissolved methane which is/was likely the result of landfill gas migration on to the site. It is reasonable to expect that if landfill gas can migrate to the site under current, passive conditions (i.e., with no SVE system), then there is a greatly increased likelihood of additional landfill gas migration under active conditions (i.e., with an active SVE system) with a corresponding potential increase in groundwater quality degradation and health and safety related issues associated with uncontrolled landfill gas migration via underground utilities.

Finally, it must be emphasized that the SVE system would be designed to reduce contaminant load in site soils and thus reduce the potential for contaminant migration from site soil to site groundwater, premised on the assumption that current groundwater impacts are generally a function of the current soil contaminant load. Given that the upgradient groundwater plume(s), which appears to have already reached the site, contain higher concentrations of some COCs than are currently in site groundwater, it is fair to expect that the upgradient source will be significantly larger and/or more heavily contaminated than what presently remains in site soil. Under these conditions the incremental improvement to site groundwater quality via the implementation of an SVE system will be immeasurable or nonexistent.

On the basis of these arguments, the IPC Settling Defendants recommended previously (*River Well Statistics Technical Memorandum, June 1, 2010*), and continues to recommend, that the SVE system be excluded from further consideration as a contingent remedy.

1.5 Fifteenth Year Annual Report Overview

The purpose of this report is to provide the results of long-term natural attenuation monitoring to date at the site, a comparison of the data to previously calculated/IEPA-approved background groundwater quality standards, and an evaluation of whether the site is currently impacting groundwater. This report is organized as follows:

- Section 2.0 provides an evaluation of groundwater quality based on a comparison of COC detections with calculated COC background standards.
- Section 3.0 includes an alternative source demonstration (ASD) for various COCs detected currently or previously in monitoring wells MW1 and MW4 and, in general, any other statistically significant changes to groundwater quality, if any.
- Section 4.0 includes a summary and conclusions.
- Section 5.0 includes references.

2.0 EVALUATION OF SITE GROUNDWATER QUALITY

2.1 Results of Ongoing Natural Attenuation Groundwater Monitoring

Annual groundwater sampling for each of the seven COCs was performed in each of the eight natural attenuation monitoring wells during this reporting period. Groundwater sampling and analysis was performed in accordance with the IEPA-approved FSP, QAPP, and GWMP. Each well is purged until temperature, conductivity, pH, and turbidity stabilize within accepted criteria, to the extent that is practical. The laboratory data reports are included as Attachment 1.

A summary of the analytical results for each COC in each monitoring well during this monitoring period is included in Table 1. Concentration time trends for each COC in each well are included as Attachment 2.

Each laboratory data report was reviewed for completeness and accuracy, in accordance with the IEPA-approved quality assurance project plan (QAPP). The reviews included laboratory QA/QC documentation and the results of field and quality control blanks. Data validation summaries for each laboratory sampling report are included in Attachment 3.

A discussion of site groundwater quality is included below.

2.1.1 Upgradient Site Groundwater Quality

Overall upgradient groundwater quality has improved with respect to total VOC load since natural attenuation monitoring began in 2007, even though the concentration of tetrachloroethene (PCE) has generally increased in upgradient wells MW5 and MW6 during the same period. This is consistent with the apparent arrival of the off-site, upgradient VOC plume (or discrete “slugs” from that plume), as reported previously. As stated in the ROD,

“One of the most notable outcomes of the groundwater portion of the [RI] investigation was verification that a plume of chlorinated volatile organic compounds, at substantially higher concentrations than occur on site is approaching the site from the north east. The plume is expected to reach the IPC site in 15 to 45 years.”

Given that the RI data collection activities were completed by 1994, arrival of the plume by 2009 is entirely consistent with the predictions included in the RI Report. This appears to be further supported by the total (i.e., cumulative) VOC load trends included as Attachment 4.

2.1.2 Downgradient Site Groundwater Quality

During this reporting period there were no confirmed statistical exceedances in any of the downgradient site monitoring wells, as defined in the IEPA-approved statistical analysis plan. Downgradient groundwater quality in the three downgradient site wells has continued to improve since natural attenuation monitoring began. Total VOC load in the downgradient wells, depicted in the time trends included as Attachment 4, has decreased fairly steadily and is currently at 225.9 ug/L, near historical lows. This represents a decrease of approximately 78 percent when

compared to the highest total VOC load concentration of 1020 ug/L just after natural attenuation monitoring began.

The historical presence of 1,1-DCA and vinyl chloride in well MW4, both at relatively high concentrations compared to the other site monitoring wells, was reported previously in the First Year Annual Report/Technical Memorandum and was attributed to landfill gas from a known off-site/site gradient and uncontained source, the Peoples Avenue Landfill. This was the primary motivation behind our initial request to exclude these two compounds from long-term natural attenuation monitoring, which was denied by IEPA.

This report includes an alternative source demonstration (ASD) in Section 3.0 for 1,1-DCA and vinyl chloride in well MW4 even though 1,1-DCA was not detected and vinyl chloride did not exceed its background standard during this reporting period.

2.1.3 Comparison of Upgradient Vs. Downgradient Groundwater Quality

As shown in the total VOC load time trends, the total (i.e., cumulative) VOC load has always been higher in the three upgradient wells compared to the three downgradient wells since natural attenuation monitoring began in 2007. Clearly, upgradient groundwater quality is currently, and has been since the beginning of natural attenuation monitoring, worse than downgradient groundwater quality based on total VOC load. Therefore, it is reasonable to conclude that upgradient sources are significantly contributing to groundwater contaminant loads at the site. And, in spite of this, downgradient groundwater quality has continued to improve.

The IEPA requested in their August 26, 2009 Second Year Annual Report comment letter that a graph showing the sum of trichloroethene (TCE) and 1,1,1-trichloroethane (1,1,1-TCA) in the upgradient site wells compared with the sum in the downgradient site wells be included in the annual reports. Such time trends for all COCs are included in Attachment 5. As shown on the graph, the total concentrations of these two compounds have been consistently higher in the upgradient wells (driven in recent years by TCE). The sum of TCE and 1,1,1-TCA in the upgradient wells peaked in December 2009. Since that time, the concentrations of both compounds have been generally decreasing.

During the same time period the sum of TCE and 1,1,1-TCA in the downgradient wells has generally mirrored the pattern observed in the upgradient wells. However, it is relevant to note that the sum of TCE and 1,1,1-TCA in the downgradient wells is now approximately 90% less than it was at its peak, and this in spite of the arrival of the upgradient plume. Based on this comparison, groundwater quality has improved downgradient of the site compared to upgradient of the site.

In addition, total upgradient vs. downgradient VOC load trends for each COC are included as Attachment 6. These clearly show that the main VOC load contributors, PCE and TCE, have always been significantly higher in the upgradient wells compared to the downgradient wells.

2.1.4 Downgradient River Well Groundwater Quality

The area downgradient of the site (near the Rock River) is monitored using wells MW8 and MW9. There was a single detection of 1,1-DCA in MW9 during this reporting period, but at a concentration that was below its background standard.

Four VOCs were detected in MW8 during this reporting period. These included 1,1-DCA, cis-1,2-DCE, PCE, and TCE, similar to previous years. The concentrations of each compound were well below their respective interwell background standards, with the single exception of 1,1-DCA. However, the concentration continues to be below its intrawell background standard. As reported previously, there appears to be a seasonality associated with the 1,1-DCA concentrations, with nearly all of the high concentrations occurring during the December sampling events (Refer to Attachment 2).

Based on the above results, there is no indication of site-related groundwater impacts in the river wells.

2.1.4 Quality Assurance/Quality Control Issues

There were no major quality assurance/quality control (QA/QC) issues identified during this reporting period. However, there was one minor QA/QC issue that was identified during the January 2022 resampling event, listed below:

- **January 2022:** *“Method 8260B: The following sample(s) was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed within the 7-day holding time specified for unpreserved samples: MW8 (500-210799-1).”*

The above minor QA/QC issue does not affect the integrity of the data or the report conclusions included herein.

3.0 ALTERNATIVE SOURCE DEMONSTRATION FOR SELECT VOCS DETECTED IN SITE MONITORING WELLS MW1 AND MW4

None of the VOCs detected in wells MW1 and MW4 exceeded their respective interwell background standards during the December sampling event. However, this alternative source demonstration is included to address the presence of some specific VOC compounds.

Groundwater samples collected during the quarterly background monitoring were also analyzed for dissolved methane during the third quarter 2008 monitoring event, as reported previously in the First Year Annual Report/Technical Memorandum. Dissolved methane, a major component of landfill gas, was detected in five of the six site monitoring wells, and at the highest concentration in well MW4, located closest to the Peoples Avenue Landfill. The dissolved methane results are summarized in the table below.

Results of Dissolved Methane Analyses (Third Quarter 2008)

Sample Location	Concentration of Dissolved Methane (ug/L)	Reporting Limit (ug/L)
MW1	2.1	0.19
MW2	2.1	0.19
MW3	4.1	0.19
MW4	42	0.19
MW5	ND	0.19
MW6	1.2	0.19
MW7*	1.3	0.19
Field blank	ND	0.19
Trip blank	ND	0.19

ND = not detected at the reporting limit

* "blind" duplicate sample collected from MW6

3.1 Sources of Naturally Occurring Dissolved Methane

The relatively low dissolved methane concentrations in four of the wells may have been indicative of methanogenesis, a naturally occurring form of anaerobic respiration associated with certain common microbes in the presence of organic material. Subsurface soil at the site was reported in the RI report to have contained relatively high concentrations of total organic carbon (TOC). Given that the site cap has likely created subsurface anaerobic conditions, the presence of an abundant "food" source (i.e., the high TOC), it is not unreasonable to assume that methanogenesis is occurring. Therefore, the previously reported site-wide presence of relatively low concentrations of dissolved methane could indicate that natural attenuation was/is active.

3.2 Off-Site Sources of Dissolved Methane

The Peoples Avenue Landfill is located adjacent to and south/southeast of the site, and reportedly received a combination of residential, commercial, and industrial wastes. The combustible gas methane was previously detected in the basement of the adjacent pet food plant, and it was attributed to the Peoples Avenue Landfill (USEPA, 1976; RI Report, 1994). Two isolated areas with elevated combustible gas readings (i.e., methane) were also identified between the site and the Peoples Avenue Landfill during RI activities conducted in the early 1990's. Soil gas collected from these areas also contained slightly elevated concentrations of VOCs. The conclusion contained in the RI was:

"The USEPA and RI soil gas results indicate, therefore, that the Peoples Avenue Landfill may be an active source of combustible gases and, possibly, organic vapors in the Site area."

Landfill gas migration is a commonly known transport mechanism for numerous VOCs including tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, vinyl chloride, and others (Vogel et al., 1987). As such, landfill gas migration has been implicated to be a principal source of many VOCs in groundwater near landfills, including those currently detected in site groundwater.

While dissolved methane was discovered in most of the site monitoring wells, the concentrations were relatively low and, therefore, are likely at least partially the result of on-site methanogenesis.

MW4

The concentrations of the previously detected VOCs in MW4 have decreased to their lowest levels since the beginning of natural attenuation monitoring. Vinyl chloride was the only VOC detected during this reporting period, but at a concentration that was below its background standard. In any case, the following alternative source demonstration is provided for informational purposes.

Given that MW4 is located adjacent to the Peoples Avenue Landfill and it previously contained, by far, the highest concentration of dissolved methane compared to the other wells, it is highly likely that landfill gas from the Peoples Avenue Landfill was the source for much, or all, of the dissolved methane in MW4. This is consistent with the previous reports documented herein. Given that landfill gas is a common carrier of numerous VOCs, including 1,1-DCA and vinyl chloride, it is fair to conclude that the previously elevated concentrations of compounds such as 1,1-DCA and vinyl chloride in MW4 were/are also the result of the presence of landfill gas.

It is important to note that neither 1,1-DCA nor vinyl chloride are exhibiting increasing trends in MW4, and in fact 1,1-DCA was not detected during this reporting period. The total VOC load in MW4 has continued to decrease from a high of 389 ug/L in December 2007 to a historic low of 5.1 ug/L during the most recent sampling event, a drop of about 99 percent.

In summary, therefore, there is no indication that groundwater conditions at MW4 are deteriorating due to the site and, in fact, groundwater conditions in this well have improved significantly based on the individual VOC trends and on total VOC load.

MW1

There were no exceedances of interwell background standards at MW-1 during this reporting period. Total VOC load in MW1 has decreased from a high of approximately 336 ug/L in June 2008 to approximately 61.8 ug/L during this reporting period, a decrease of approximately 82 percent.

It is possible that landfill gas has affected groundwater conditions in this well and have thus biased the concentration of 1,1-DCA and vinyl chloride, as indicated by the historical presence of dissolved methane in groundwater at this well. Other known (or unknown) upgradient sources may also be contributing sources. While MW1 is technically a downgradient well, it is located such that it could easily be considered sidegradient. Based on the location of MW1, it is easy to see that a plume migrating from the northeast or from the former quarry to the north could, potentially, impact MW1 while not affecting the upgradient wells.

In any case, overall groundwater conditions have clearly improved in MW1 with respect to individual VOC trends and total VOC load, and there is no indication of site-related degradation in groundwater quality at this well.

4.0 SUMMARY AND CONCLUSIONS

The results of long-term natural attenuation monitoring to date indicate the following:

1. There were no statistical failures for any of the site monitoring wells during this reporting period.
2. Changes in COC concentrations in site groundwater occur relatively slowly.
3. There was an interwell background exceedance for 1,1 DCA in River Well MW8. However, the concentration was below its intrawell standard.

It is reasonable to assume that “slugs” of the off-site plume may periodically migrate through the site and impact the downgradient monitoring wells, including the River Wells, possibly resulting in new “false-positive” statistical failures that will need to be addressed either by revising calculated background standards or by changing the statistical evaluation protocol (or both).

4. While on-site methanogenesis is likely occurring, indicating that natural attenuation is active, the relatively high (i.e., anomalous) concentrations of dissolved methane previously detected in downgradient well MW4 appear to be have been the result of landfill gas migration from the Peoples Avenue Landfill. It is likely that the associated relatively high concentrations of 1,1-DCA and vinyl chloride in MW4 were also the result of the presence of landfill gas and were not site-related. The presence of these compounds in other site wells may also have been biased high due to the presence of landfill gas. In any case, the concentrations of those compounds have since decreased significantly in MW4, and they are currently below background standards.
5. Total (i.e., cumulative) COC load in the downgradient wells has decreased approximately 78% since natural attenuation monitoring began in 2007. Similarly, the cumulative concentrations of TCE and 1,1,1-TCA have also decreased by approximately 90% since natural attenuation monitoring began.
6. Stable to decreasing trends are apparent for all COCs at all monitoring wells with the exception of PCE at upgradient well MW5 and downgradient well MW2. PCE concentrations at MW2 track closely to but are consistently lower than in MW5, indicating that an upgradient “slug” of PCE is migrating on site from an upgradient source.
7. Possibly the most meaningful observation of the groundwater data is that the cumulative COC load in the upgradient wells continues to be higher than in the downgradient wells, most notably with respect to the primary VOC load contributors, PCE and TCE. The same can generally be said for the other COCs with the exception of vinyl chloride, whose presence in downgradient site wells can be attributed to a combination of chlorinated solvent degradation from off-site sources and/or off-site contribution from the adjacent Peoples Avenue Landfill. The elevated concentration of COCs in upgradient site wells vs. downgradient site wells indicates that there may be little to no

site-related groundwater degradation in either the site monitoring wells or in the river wells. At this time, our groundwater monitoring efforts seem to primarily track the migration of COC concentrations in groundwater from upgradient, off-site sources as they migrate beneath the site, which was not purpose of the groundwater monitoring obligation in the Consent Decree.

8. After nearly 16 years of natural attenuation monitoring, site groundwater quality has been steadily improving in spite of the presence of several known (and presently uncontrolled) upgradient sources.

We look forward to the IEPA's approval of this report. If you have any questions, please do not hesitate to call me at 630 699-5881.

Sincerely,
ENVIRONMENTAL INFORMATION LOGISTICS, LLC

A handwritten signature in black ink that reads "A. Michael Hirt". The signature is written in a cursive, flowing style. The first letter "A" is large and loops around. The last name "Hirt" is written with a large, circular flourish at the end.

A. Michael Hirt, P.G.
Senior Geologist

5.0 REFERENCES

Golder Associates, Inc., 1994, Final Remedial Investigation Report, Interstate Pollution Control Inc. Site, Rockford, Illinois.

USEPA, 1976, *Leachate Damage Assessment: Case Study of the Peoples Avenue Landfill Solid Waste Disposal Site in Rockford, Illinois*, EPA/530/SW-517.

Vogel et al., 1987, *Transformation of Halogenated Aliphatic Compounds*, Environmental Science Technology, vol. 21, pp. 722-736.

Table 1
June - December 2021
Data Summary
IPC/Roto-Rooter Site

Well	Location	Parameter ID	Parameter	Units	Interwell Upper Limit (95%)	Intrawell Upper Limit (99%)	Jun-21		Dec-21		Jan-22		Dec 2021 Exceedance?
							Result	Qual	Result	Qual	Result	Qual	
MW1	Downgradient	190494	1,1,1-Trichloroethane	ug/L	52.5	25.1	5	U	5	U	NA		No
MW1	Downgradient	190504	1,1-Dichloroethane	ug/L	17	24.0	5	U	5	U	NA		No
MW1	Downgradient	190499	1,1-Dichloroethene	ug/L	32.9	21.1	5	U	5	U	NA		No
MW1	Downgradient	147907	cis-1,2-Dichloroethene	ug/L	250	295	41		38		NA		No
MW1	Downgradient	190525	Tetrachloroethene	ug/L	65.2	5.6	6.1		6.4		NA		No
MW1	Downgradient	185820	Trichloroethene	ug/L	340	324	8.3		8.1		NA		No
MW1	Downgradient	185825	Vinyl Chloride	ug/L	48	10.4	8.1		9.3		NA		No
MW2	Downgradient	190494	1,1,1-Trichloroethane	ug/L	52.5	39.3	5	U	5	U	NA		No
MW2	Downgradient	190504	1,1-Dichloroethane	ug/L	17	5.4	5	U	5	U	NA		No
MW2	Downgradient	190499	1,1-Dichloroethene	ug/L	32.9	30.6	5	U	5	U	NA		No
MW2	Downgradient	147907	cis-1,2-Dichloroethene	ug/L	250	131	5	U	5	U	NA		No
MW2	Downgradient	190525	Tetrachloroethene	ug/L	65.2	23.1	45		50		NA		No
MW2	Downgradient	185820	Trichloroethene	ug/L	340	293	44		42		NA		No
MW2	Downgradient	185825	Vinyl Chloride	ug/L	48	10.0	2	U	2	U	NA		No
MW3	Upgradient	190494	1,1,1-Trichloroethane	ug/L	52.5	45.5	5	U	5	U	NA		No
MW3	Upgradient	190504	1,1-Dichloroethane	ug/L	17	17	5	U	5	U	NA		No
MW3	Upgradient	190499	1,1-Dichloroethene	ug/L	32.9	36.3	5	U	5	U	NA		No
MW3	Upgradient	147907	cis-1,2-Dichloroethene	ug/L	250	126	5	U	5	U	NA		No
MW3	Upgradient	190525	Tetrachloroethene	ug/L	65.2	90.3	46		49		NA		No
MW3	Upgradient	185820	Trichloroethene	ug/L	340	310	43		44		NA		No
MW3	Upgradient	185825	Vinyl Chloride	ug/L	48	2.0	2	U	2	U	NA		No
MW4	Downgradient	190494	1,1,1-Trichloroethane	ug/L	52.5	47.2	5	U	5	U	NA		No
MW4	Downgradient	190504	1,1-Dichloroethane	ug/L	17	69.9	5.1		5	U	NA		No
MW4	Downgradient	190499	1,1-Dichloroethene	ug/L	32.9	33.0	5	U	5	U	NA		No
MW4	Downgradient	147907	cis-1,2-Dichloroethene	ug/L	250	461	5.3		5	U	NA		No
MW4	Downgradient	190525	Tetrachloroethene	ug/L	65.2	5.0	5	U	5	U	NA		No
MW4	Downgradient	185820	Trichloroethene	ug/L	340	5.0	5	U	5	U	NA		No
MW4	Downgradient	185825	Vinyl Chloride	ug/L	48	137	6.6		5.1		NA		No
MW5	Upgradient	190494	1,1,1-Trichloroethane	ug/L	52.5	78.5	5	U	5	U	NA		No
MW5	Upgradient	190504	1,1-Dichloroethane	ug/L	17	25.8	5	U	5	U	NA		No
MW5	Upgradient	190499	1,1-Dichloroethene	ug/L	32.9	34.0	5	U	5	U	NA		No
MW5	Upgradient	147907	cis-1,2-Dichloroethene	ug/L	250	519	5	U	5	U	NA		No
MW5	Upgradient	190525	Tetrachloroethene	ug/L	65.2	75.7	60		64		NA		No
MW5	Upgradient	185820	Trichloroethene	ug/L	340	390	32		32		NA		No
MW5	Upgradient	185825	Vinyl Chloride	ug/L	48	15.0	2	U	2	U	NA		No
MW6	Upgradient	190494	1,1,1-Trichloroethane	ug/L	52.5	71.3	5	U	5	U	NA		No
MW6	Upgradient	190504	1,1-Dichloroethane	ug/L	17	42.1	5	U	6.1		NA		No
MW6	Upgradient	190499	1,1-Dichloroethene	ug/L	32.9	36.5	5	U	5	U	NA		No
MW6	Upgradient	147907	cis-1,2-Dichloroethene	ug/L	250	352	11		15		NA		No
MW6	Upgradient	190525	Tetrachloroethene	ug/L	65.2	58.9	38		22		NA		No
MW6	Upgradient	185820	Trichloroethene	ug/L	340	220	19		22		NA		No
MW6	Upgradient	185825	Vinyl Chloride	ug/L	48	104	7.5		5.7		NA		No
MW8	Downgradient	190494	1,1,1-Trichloroethane	ug/L	52.5	30.2	5	U	5	U	NA		No
MW8	Downgradient	190504	1,1-Dichloroethane	ug/L	17	34.0	15		20		19		YES
MW8	Downgradient	190499	1,1-Dichloroethene	ug/L	32.9	14.1	5	U	5	U	NA		No
MW8	Downgradient	147907	cis-1,2-Dichloroethene	ug/L	250	78.2	8.5		14		NA		No
MW8	Downgradient	190525	Tetrachloroethene	ug/L	65.2	5.0	7.7		12		NA		No
MW8	Downgradient	185820	Trichloroethene	ug/L	340	171	12		14		NA		No
MW8	Downgradient	185825	Vinyl Chloride	ug/L	48	2.0	2	U	2	U	NA		No
MW9	Downgradient	190494	1,1,1-Trichloroethane	ug/L	52.5	5.0	5	U	5	U	NA		No
MW9	Downgradient	190504	1,1-Dichloroethane	ug/L	17	5.0	5	U	13		NA		No
MW9	Downgradient	190499	1,1-Dichloroethene	ug/L	32.9	5.0	5	U	5	U	NA		No
MW9	Downgradient	147907	cis-1,2-Dichloroethene	ug/L	250	5.0	5	U	5	U	NA		No
MW9	Downgradient	190525	Tetrachloroethene	ug/L	65.2	5.0	5	U	5	U	NA		No
MW9	Downgradient	185820	Trichloroethene	ug/L	340	5.0	5	U	5	U	NA		No
MW9	Downgradient	185825	Vinyl Chloride	ug/L	48	2.0	2	U	2	U	NA		No

All data reported in ug/L.

NA - Not Applicable / U - Not Detected

Interwell and Intrawell limits calculated using background data collected: Sep. 2007, Dec. 2007, Mar. 2008, and Jun. 2008. **Except for:**

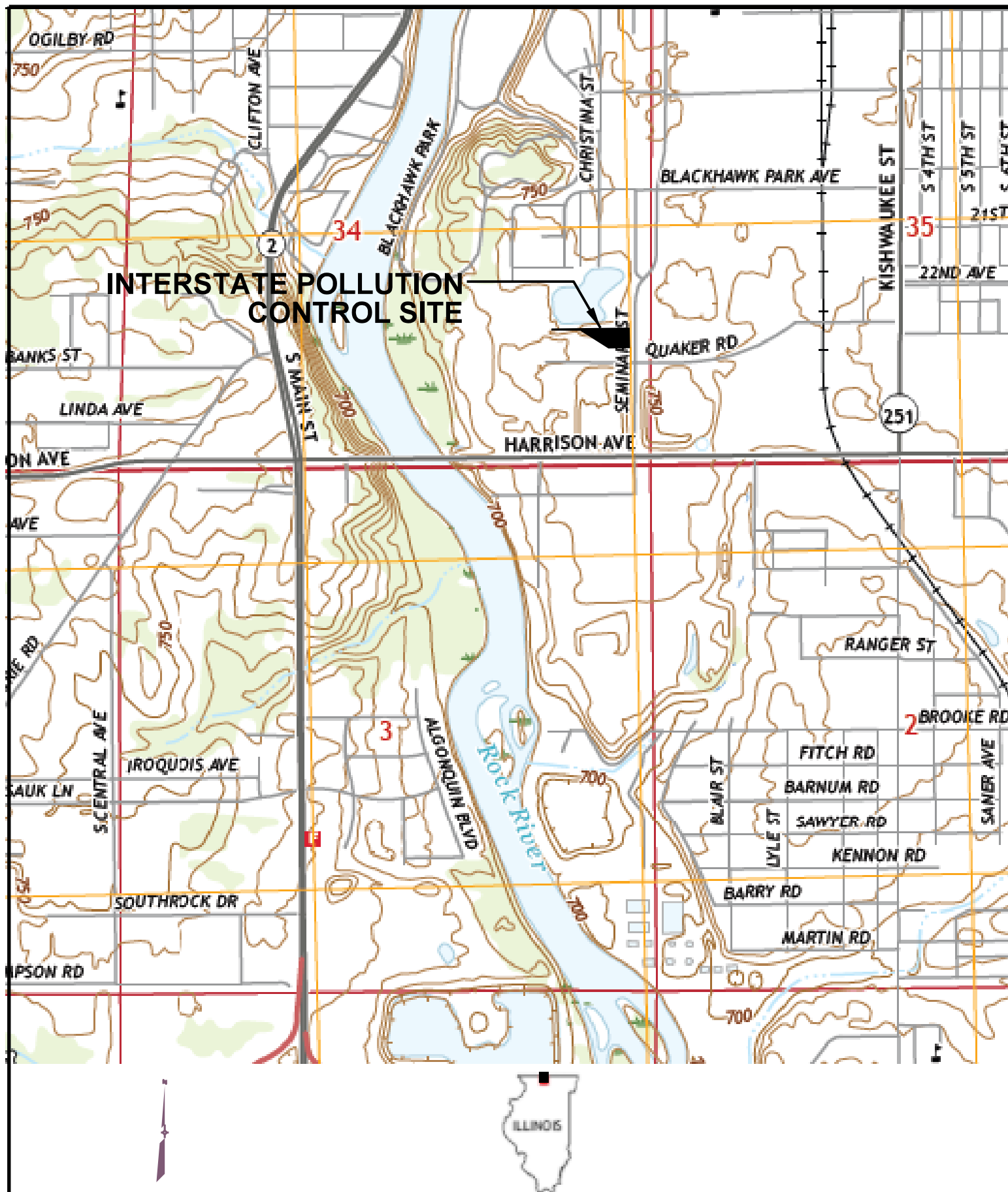
Interwell limits for trichloroethene collected: Dec. 2007, Jun. 2008, Dec. 2008, and Jun. 2009

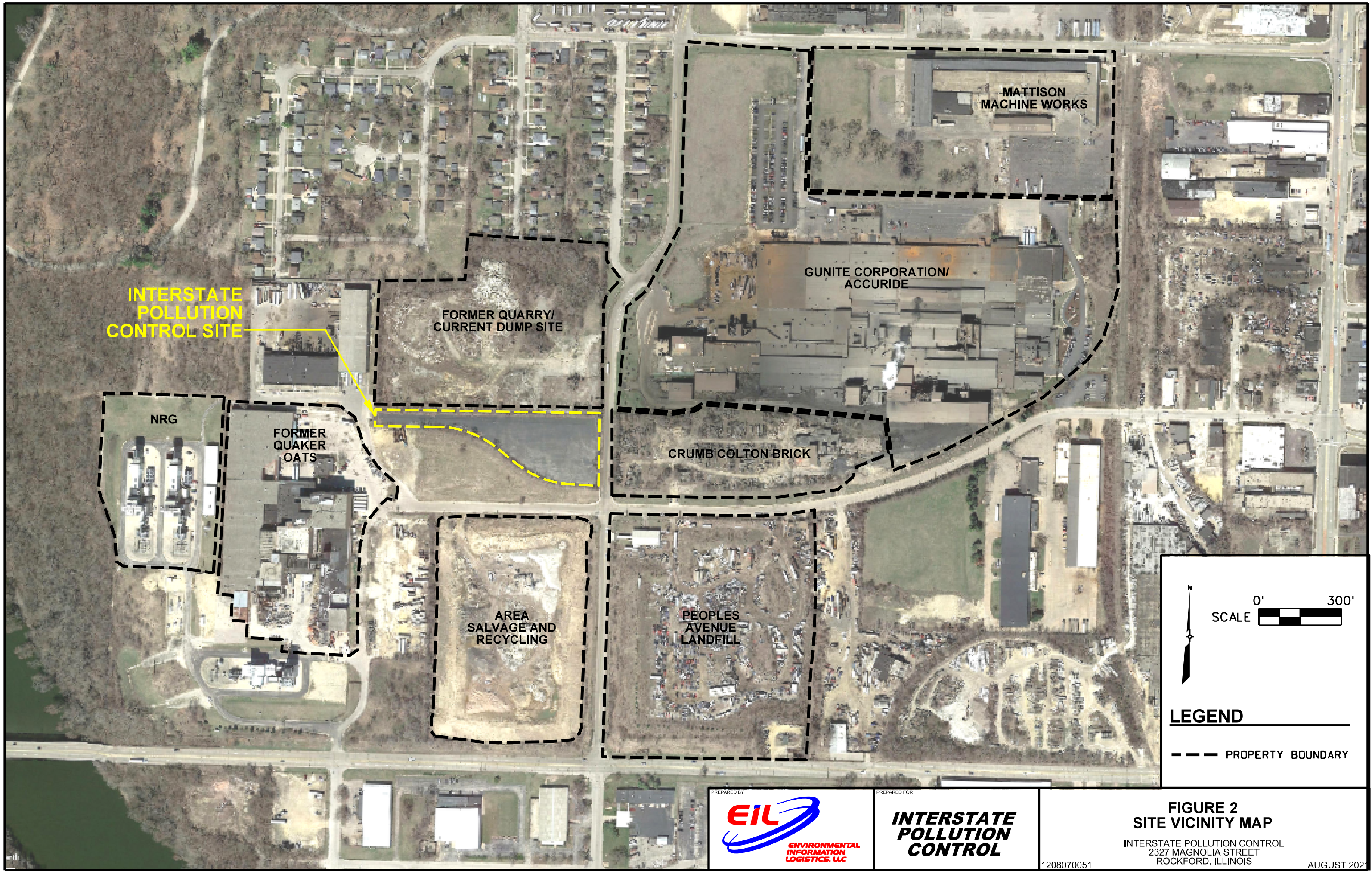
Interwell limits for 1,1-DCA and tetrachloroethene collected: Dec. 2017, Jun. 2018, Dec. 2018, and Jun. 2019.

Intrawell limits for trichloroethene (MW6) collected: Dec. 2007, Jun. 2008, Dec. 2008, and Jun. 2009.

Intrawell limits for 1,1-DCA and tetrachloroethene (MW3); tetrachloroethene (MW6) collected: Dec.2017, Jun. 2018, Dec. 2018, and Jun. 2019.

Intrawell limits for all parameters (MW8 and MW9) collected: Mar. 2009, Jun. 2009, Sep. 2009, and Dec. 2009.







GUNITE CORPORATION/
ACCURIDE

FORMER QUARRY/
CURRENT DUMP SITE

INTERSTATE
POLLUTION
CONTROL SITE

NRG

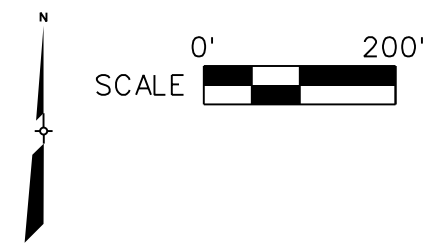
FORMER
QUAKER
OATS

ASPHALT CAP

CRUMB COLTON BRICK

AREA
SALVAGE AND
RECYCLING

PEOPLES
AVENUE
LANDFILL



LEGEND

--- PROPERTY BOUNDARY

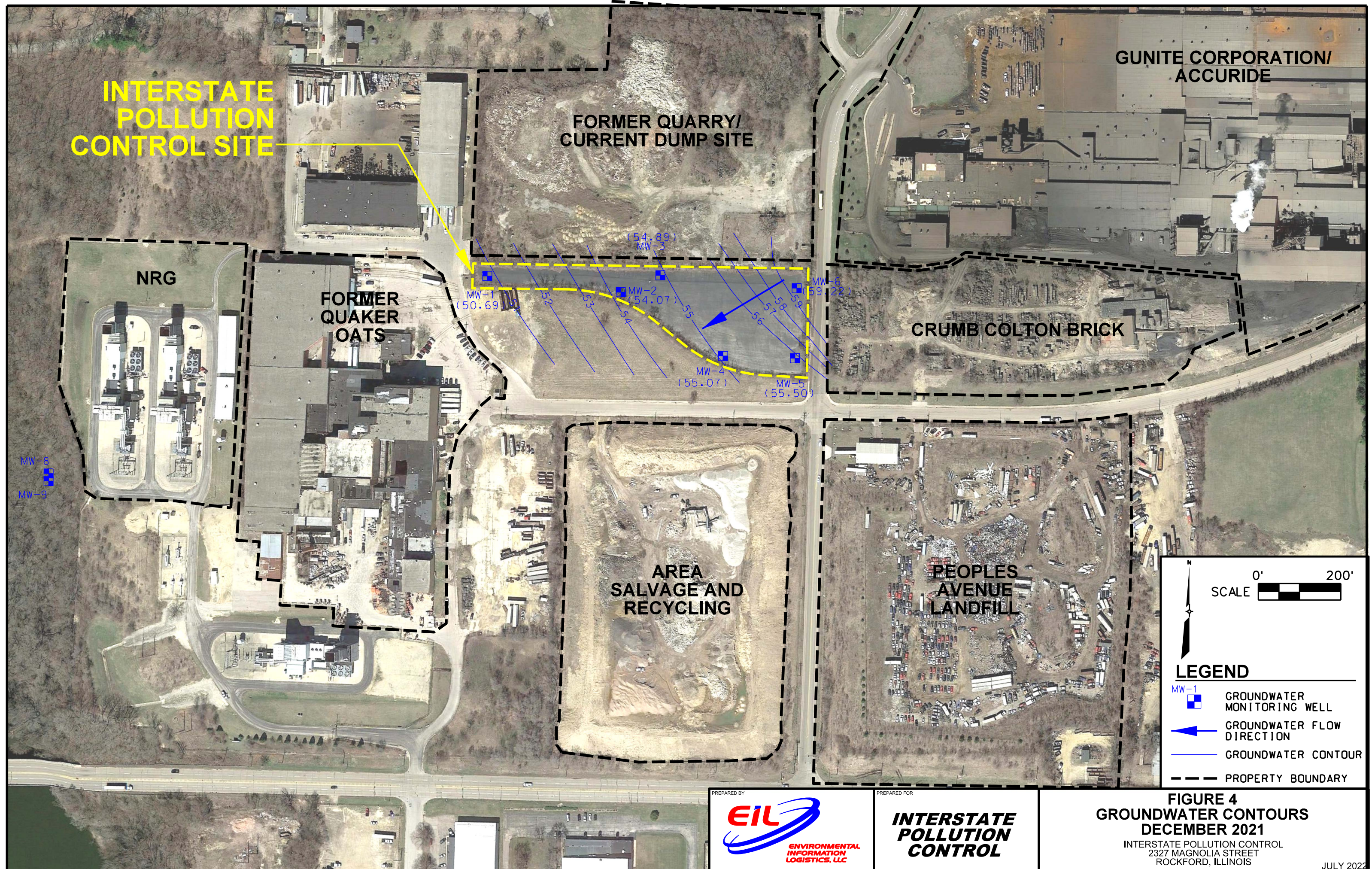
MW-4 GROUNDWATER
MONITORING WELL

PREPARED BY

ENVIRONMENTAL
INFORMATION
LOGISTICS, LLC

PREPARED FOR
**INTERSTATE
POLLUTION
CONTROL**

**FIGURE 3
SITE LAYOUT**
INTERSTATE POLLUTION CONTROL
2327 MAGNOLIA STREET
ROCKFORD, ILLINOIS
1208070051
AUGUST 2021



Attachment 1

Laboratory Data Reports

ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-209995-1

Client Project/Site: Interstate Pollution Control Site

For:

Environmental Information Logistics (EIL)
534 Duane Street
Glen Ellyn, Illinois 60137

Attn: Ms. Mary Pearson



Authorized for release by:
12/30/2021 4:44:45 PM

Richard Wright, Senior Project Manager
(708)746-0045

Richard.Wright@Eurofinset.com

LINKS

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results through

TotalAccess

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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Job ID: 500-209995-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative 500-209995-1

Receipt

The samples were received on 12/17/2021 10:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8° C.

Receipt Exceptions

A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC). The trip blank was added to the chain of custody by TestAmerica personnel and logged in for analysis.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW1

Lab Sample ID: 500-209995-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	9.3		2.0	0.20	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	38		5.0	0.41	ug/L	1		8260B	Total/NA
Trichloroethene	8.1		5.0	0.16	ug/L	1		8260B	Total/NA
Tetrachloroethene	6.4		5.0	0.37	ug/L	1		8260B	Total/NA

Client Sample ID: IPC GW MW2

Lab Sample ID: 500-209995-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	42		5.0	0.16	ug/L	1		8260B	Total/NA
Tetrachloroethene	50		5.0	0.37	ug/L	1		8260B	Total/NA

Client Sample ID: IPC GW MW3

Lab Sample ID: 500-209995-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	44		5.0	0.16	ug/L	1		8260B	Total/NA
Tetrachloroethene	49		5.0	0.37	ug/L	1		8260B	Total/NA

Client Sample ID: IPC GW MW4

Lab Sample ID: 500-209995-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	5.1		2.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: IPC GW MW5

Lab Sample ID: 500-209995-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	32		5.0	0.16	ug/L	1		8260B	Total/NA
Tetrachloroethene	64		5.0	0.37	ug/L	1		8260B	Total/NA

Client Sample ID: IPC GW MW6

Lab Sample ID: 500-209995-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	5.7		2.0	0.20	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	6.1		5.0	0.41	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	15		5.0	0.41	ug/L	1		8260B	Total/NA
Trichloroethene	22		5.0	0.16	ug/L	1		8260B	Total/NA
Tetrachloroethene	22		5.0	0.37	ug/L	1		8260B	Total/NA

Client Sample ID: IPC GW MW7

Lab Sample ID: 500-209995-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	10		2.0	0.20	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	37		5.0	0.41	ug/L	1		8260B	Total/NA
Trichloroethene	6.9		5.0	0.16	ug/L	1		8260B	Total/NA
Tetrachloroethene	5.5		5.0	0.37	ug/L	1		8260B	Total/NA

Client Sample ID: IPC GW MW8

Lab Sample ID: 500-209995-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	20		5.0	0.41	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	14		5.0	0.41	ug/L	1		8260B	Total/NA
Trichloroethene	14		5.0	0.16	ug/L	1		8260B	Total/NA
Tetrachloroethene	12		5.0	0.37	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

Detection Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW9

Lab Sample ID: 500-209995-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	13		5.0	0.41	ug/L	1		8260B	Total/NA

Client Sample ID: IPC FB

Lab Sample ID: 500-209995-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	5.2		5.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: Trip Blank

Lab Sample ID: 500-209995-11

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

Method Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
5030B	Purge and Trap	SW846	TAL CHI

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-209995-1	IPC GW MW1	Water	12/16/21 11:50	12/17/21 10:50
500-209995-2	IPC GW MW2	Water	12/16/21 11:20	12/17/21 10:50
500-209995-3	IPC GW MW3	Water	12/16/21 10:20	12/17/21 10:50
500-209995-4	IPC GW MW4	Water	12/16/21 09:30	12/17/21 10:50
500-209995-5	IPC GW MW5	Water	12/16/21 07:25	12/17/21 10:50
500-209995-6	IPC GW MW6	Water	12/16/21 07:55	12/17/21 10:50
500-209995-7	IPC GW MW7	Water	12/16/21 12:20	12/17/21 10:50
500-209995-8	IPC GW MW8	Water	12/16/21 12:59	12/17/21 10:50
500-209995-9	IPC GW MW9	Water	12/16/21 13:10	12/17/21 10:50
500-209995-10	IPC FB	Water	12/16/21 13:30	12/17/21 10:50
500-209995-11	Trip Blank	Water	12/16/21 00:00	12/17/21 10:50

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW1

Lab Sample ID: 500-209995-1

Date Collected: 12/16/21 11:50

Matrix: Water

Date Received: 12/17/21 10:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	0.15	ug/L			12/28/21 12:14	1
Chloromethane	<5.0		5.0	0.32	ug/L			12/28/21 12:14	1
Vinyl chloride	9.3		2.0	0.20	ug/L			12/28/21 12:14	1
Bromomethane	<5.0		5.0	0.80	ug/L			12/28/21 12:14	1
Chloroethane	<5.0		5.0	0.51	ug/L			12/28/21 12:14	1
1,1-Dichloroethene	<5.0		5.0	0.39	ug/L			12/28/21 12:14	1
Carbon disulfide	<5.0		5.0	0.45	ug/L			12/28/21 12:14	1
Acetone	<20		20	1.7	ug/L			12/28/21 12:14	1
Methylene Chloride	<10		10	1.6	ug/L			12/28/21 12:14	1
trans-1,2-Dichloroethene	<5.0		5.0	0.35	ug/L			12/28/21 12:14	1
1,1-Dichloroethane	<5.0		5.0	0.41	ug/L			12/28/21 12:14	1
cis-1,2-Dichloroethene	38		5.0	0.41	ug/L			12/28/21 12:14	1
Methyl Ethyl Ketone	<20		20	2.1	ug/L			12/28/21 12:14	1
Chloroform	<5.0		5.0	0.37	ug/L			12/28/21 12:14	1
1,1,1-Trichloroethane	<5.0		5.0	0.38	ug/L			12/28/21 12:14	1
Carbon tetrachloride	<5.0		5.0	0.38	ug/L			12/28/21 12:14	1
1,2-Dichloroethane	<5.0		5.0	0.39	ug/L			12/28/21 12:14	1
Trichloroethene	8.1		5.0	0.16	ug/L			12/28/21 12:14	1
1,2-Dichloropropane	<5.0		5.0	0.43	ug/L			12/28/21 12:14	1
Bromodichloromethane	<5.0		5.0	0.37	ug/L			12/28/21 12:14	1
cis-1,3-Dichloropropene	<5.0		5.0	0.42	ug/L			12/28/21 12:14	1
methyl isobutyl ketone	<20		20	2.2	ug/L			12/28/21 12:14	1
Toluene	<5.0		5.0	0.15	ug/L			12/28/21 12:14	1
trans-1,3-Dichloropropene	<5.0		5.0	0.36	ug/L			12/28/21 12:14	1
1,1,2-Trichloroethane	<5.0		5.0	0.35	ug/L			12/28/21 12:14	1
Tetrachloroethene	6.4		5.0	0.37	ug/L			12/28/21 12:14	1
2-Hexanone	<20		20	1.6	ug/L			12/28/21 12:14	1
Dibromochloromethane	<5.0		5.0	0.49	ug/L			12/28/21 12:14	1
Chlorobenzene	<5.0		5.0	0.39	ug/L			12/28/21 12:14	1
Ethylbenzene	<5.0		5.0	0.18	ug/L			12/28/21 12:14	1
Styrene	<5.0		5.0	0.39	ug/L			12/28/21 12:14	1
Bromoform	<5.0		5.0	0.48	ug/L			12/28/21 12:14	1
1,1,2,2-Tetrachloroethane	<5.0		5.0	0.40	ug/L			12/28/21 12:14	1
Xylenes, Total	<5.0		5.0	0.22	ug/L			12/28/21 12:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		75 - 126		12/28/21 12:14	1
Toluene-d8 (Surr)	94		75 - 120		12/28/21 12:14	1
4-Bromofluorobenzene (Surr)	98		72 - 124		12/28/21 12:14	1
Dibromofluoromethane	110		75 - 120		12/28/21 12:14	1

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW2

Lab Sample ID: 500-209995-2

Date Collected: 12/16/21 11:20

Matrix: Water

Date Received: 12/17/21 10:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	0.15	ug/L			12/28/21 12:41	1
Chloromethane	<5.0		5.0	0.32	ug/L			12/28/21 12:41	1
Vinyl chloride	<2.0		2.0	0.20	ug/L			12/28/21 12:41	1
Bromomethane	<5.0		5.0	0.80	ug/L			12/28/21 12:41	1
Chloroethane	<5.0		5.0	0.51	ug/L			12/28/21 12:41	1
1,1-Dichloroethene	<5.0		5.0	0.39	ug/L			12/28/21 12:41	1
Carbon disulfide	<5.0		5.0	0.45	ug/L			12/28/21 12:41	1
Acetone	<20		20	1.7	ug/L			12/28/21 12:41	1
Methylene Chloride	<10		10	1.6	ug/L			12/28/21 12:41	1
trans-1,2-Dichloroethene	<5.0		5.0	0.35	ug/L			12/28/21 12:41	1
1,1-Dichloroethane	<5.0		5.0	0.41	ug/L			12/28/21 12:41	1
cis-1,2-Dichloroethene	<5.0		5.0	0.41	ug/L			12/28/21 12:41	1
Methyl Ethyl Ketone	<20		20	2.1	ug/L			12/28/21 12:41	1
Chloroform	<5.0		5.0	0.37	ug/L			12/28/21 12:41	1
1,1,1-Trichloroethane	<5.0		5.0	0.38	ug/L			12/28/21 12:41	1
Carbon tetrachloride	<5.0		5.0	0.38	ug/L			12/28/21 12:41	1
1,2-Dichloroethane	<5.0		5.0	0.39	ug/L			12/28/21 12:41	1
Trichloroethene	42		5.0	0.16	ug/L			12/28/21 12:41	1
1,2-Dichloropropane	<5.0		5.0	0.43	ug/L			12/28/21 12:41	1
Bromodichloromethane	<5.0		5.0	0.37	ug/L			12/28/21 12:41	1
cis-1,3-Dichloropropene	<5.0		5.0	0.42	ug/L			12/28/21 12:41	1
methyl isobutyl ketone	<20		20	2.2	ug/L			12/28/21 12:41	1
Toluene	<5.0		5.0	0.15	ug/L			12/28/21 12:41	1
trans-1,3-Dichloropropene	<5.0		5.0	0.36	ug/L			12/28/21 12:41	1
1,1,2-Trichloroethane	<5.0		5.0	0.35	ug/L			12/28/21 12:41	1
Tetrachloroethene	50		5.0	0.37	ug/L			12/28/21 12:41	1
2-Hexanone	<20		20	1.6	ug/L			12/28/21 12:41	1
Dibromochloromethane	<5.0		5.0	0.49	ug/L			12/28/21 12:41	1
Chlorobenzene	<5.0		5.0	0.39	ug/L			12/28/21 12:41	1
Ethylbenzene	<5.0		5.0	0.18	ug/L			12/28/21 12:41	1
Styrene	<5.0		5.0	0.39	ug/L			12/28/21 12:41	1
Bromoform	<5.0		5.0	0.48	ug/L			12/28/21 12:41	1
1,1,2,2-Tetrachloroethane	<5.0		5.0	0.40	ug/L			12/28/21 12:41	1
Xylenes, Total	<5.0		5.0	0.22	ug/L			12/28/21 12:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		75 - 126		12/28/21 12:41	1
Toluene-d8 (Surr)	94		75 - 120		12/28/21 12:41	1
4-Bromofluorobenzene (Surr)	99		72 - 124		12/28/21 12:41	1
Dibromofluoromethane	110		75 - 120		12/28/21 12:41	1

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW3

Lab Sample ID: 500-209995-3

Date Collected: 12/16/21 10:20

Matrix: Water

Date Received: 12/17/21 10:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	0.15	ug/L			12/28/21 13:07	1
Chloromethane	<5.0		5.0	0.32	ug/L			12/28/21 13:07	1
Vinyl chloride	<2.0		2.0	0.20	ug/L			12/28/21 13:07	1
Bromomethane	<5.0		5.0	0.80	ug/L			12/28/21 13:07	1
Chloroethane	<5.0		5.0	0.51	ug/L			12/28/21 13:07	1
1,1-Dichloroethene	<5.0		5.0	0.39	ug/L			12/28/21 13:07	1
Carbon disulfide	<5.0		5.0	0.45	ug/L			12/28/21 13:07	1
Acetone	<20		20	1.7	ug/L			12/28/21 13:07	1
Methylene Chloride	<10		10	1.6	ug/L			12/28/21 13:07	1
trans-1,2-Dichloroethene	<5.0		5.0	0.35	ug/L			12/28/21 13:07	1
1,1-Dichloroethane	<5.0		5.0	0.41	ug/L			12/28/21 13:07	1
cis-1,2-Dichloroethene	<5.0		5.0	0.41	ug/L			12/28/21 13:07	1
Methyl Ethyl Ketone	<20		20	2.1	ug/L			12/28/21 13:07	1
Chloroform	<5.0		5.0	0.37	ug/L			12/28/21 13:07	1
1,1,1-Trichloroethane	<5.0		5.0	0.38	ug/L			12/28/21 13:07	1
Carbon tetrachloride	<5.0		5.0	0.38	ug/L			12/28/21 13:07	1
1,2-Dichloroethane	<5.0		5.0	0.39	ug/L			12/28/21 13:07	1
Trichloroethene	44		5.0	0.16	ug/L			12/28/21 13:07	1
1,2-Dichloropropane	<5.0		5.0	0.43	ug/L			12/28/21 13:07	1
Bromodichloromethane	<5.0		5.0	0.37	ug/L			12/28/21 13:07	1
cis-1,3-Dichloropropene	<5.0		5.0	0.42	ug/L			12/28/21 13:07	1
methyl isobutyl ketone	<20		20	2.2	ug/L			12/28/21 13:07	1
Toluene	<5.0		5.0	0.15	ug/L			12/28/21 13:07	1
trans-1,3-Dichloropropene	<5.0		5.0	0.36	ug/L			12/28/21 13:07	1
1,1,2-Trichloroethane	<5.0		5.0	0.35	ug/L			12/28/21 13:07	1
Tetrachloroethene	49		5.0	0.37	ug/L			12/28/21 13:07	1
2-Hexanone	<20		20	1.6	ug/L			12/28/21 13:07	1
Dibromochloromethane	<5.0		5.0	0.49	ug/L			12/28/21 13:07	1
Chlorobenzene	<5.0		5.0	0.39	ug/L			12/28/21 13:07	1
Ethylbenzene	<5.0		5.0	0.18	ug/L			12/28/21 13:07	1
Styrene	<5.0		5.0	0.39	ug/L			12/28/21 13:07	1
Bromoform	<5.0		5.0	0.48	ug/L			12/28/21 13:07	1
1,1,2,2-Tetrachloroethane	<5.0		5.0	0.40	ug/L			12/28/21 13:07	1
Xylenes, Total	<5.0		5.0	0.22	ug/L			12/28/21 13:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		75 - 126		12/28/21 13:07	1
Toluene-d8 (Surr)	94		75 - 120		12/28/21 13:07	1
4-Bromofluorobenzene (Surr)	99		72 - 124		12/28/21 13:07	1
Dibromofluoromethane	112		75 - 120		12/28/21 13:07	1

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW4

Lab Sample ID: 500-209995-4

Date Collected: 12/16/21 09:30

Matrix: Water

Date Received: 12/17/21 10:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	0.15	ug/L			12/28/21 13:34	1
Chloromethane	<5.0		5.0	0.32	ug/L			12/28/21 13:34	1
Vinyl chloride	5.1		2.0	0.20	ug/L			12/28/21 13:34	1
Bromomethane	<5.0		5.0	0.80	ug/L			12/28/21 13:34	1
Chloroethane	<5.0		5.0	0.51	ug/L			12/28/21 13:34	1
1,1-Dichloroethene	<5.0		5.0	0.39	ug/L			12/28/21 13:34	1
Carbon disulfide	<5.0		5.0	0.45	ug/L			12/28/21 13:34	1
Acetone	<20		20	1.7	ug/L			12/28/21 13:34	1
Methylene Chloride	<10		10	1.6	ug/L			12/28/21 13:34	1
trans-1,2-Dichloroethene	<5.0		5.0	0.35	ug/L			12/28/21 13:34	1
1,1-Dichloroethane	<5.0		5.0	0.41	ug/L			12/28/21 13:34	1
cis-1,2-Dichloroethene	<5.0		5.0	0.41	ug/L			12/28/21 13:34	1
Methyl Ethyl Ketone	<20		20	2.1	ug/L			12/28/21 13:34	1
Chloroform	<5.0		5.0	0.37	ug/L			12/28/21 13:34	1
1,1,1-Trichloroethane	<5.0		5.0	0.38	ug/L			12/28/21 13:34	1
Carbon tetrachloride	<5.0		5.0	0.38	ug/L			12/28/21 13:34	1
1,2-Dichloroethane	<5.0		5.0	0.39	ug/L			12/28/21 13:34	1
Trichloroethene	<5.0		5.0	0.16	ug/L			12/28/21 13:34	1
1,2-Dichloropropane	<5.0		5.0	0.43	ug/L			12/28/21 13:34	1
Bromodichloromethane	<5.0		5.0	0.37	ug/L			12/28/21 13:34	1
cis-1,3-Dichloropropene	<5.0		5.0	0.42	ug/L			12/28/21 13:34	1
methyl isobutyl ketone	<20		20	2.2	ug/L			12/28/21 13:34	1
Toluene	<5.0		5.0	0.15	ug/L			12/28/21 13:34	1
trans-1,3-Dichloropropene	<5.0		5.0	0.36	ug/L			12/28/21 13:34	1
1,1,2-Trichloroethane	<5.0		5.0	0.35	ug/L			12/28/21 13:34	1
Tetrachloroethene	<5.0		5.0	0.37	ug/L			12/28/21 13:34	1
2-Hexanone	<20		20	1.6	ug/L			12/28/21 13:34	1
Dibromochloromethane	<5.0		5.0	0.49	ug/L			12/28/21 13:34	1
Chlorobenzene	<5.0		5.0	0.39	ug/L			12/28/21 13:34	1
Ethylbenzene	<5.0		5.0	0.18	ug/L			12/28/21 13:34	1
Styrene	<5.0		5.0	0.39	ug/L			12/28/21 13:34	1
Bromoform	<5.0		5.0	0.48	ug/L			12/28/21 13:34	1
1,1,2,2-Tetrachloroethane	<5.0		5.0	0.40	ug/L			12/28/21 13:34	1
Xylenes, Total	<5.0		5.0	0.22	ug/L			12/28/21 13:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		75 - 126		12/28/21 13:34	1
Toluene-d8 (Surr)	93		75 - 120		12/28/21 13:34	1
4-Bromofluorobenzene (Surr)	99		72 - 124		12/28/21 13:34	1
Dibromofluoromethane	111		75 - 120		12/28/21 13:34	1

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW5

Lab Sample ID: 500-209995-5

Date Collected: 12/16/21 07:25

Matrix: Water

Date Received: 12/17/21 10:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	0.15	ug/L			12/28/21 14:01	1
Chloromethane	<5.0		5.0	0.32	ug/L			12/28/21 14:01	1
Vinyl chloride	<2.0		2.0	0.20	ug/L			12/28/21 14:01	1
Bromomethane	<5.0		5.0	0.80	ug/L			12/28/21 14:01	1
Chloroethane	<5.0		5.0	0.51	ug/L			12/28/21 14:01	1
1,1-Dichloroethene	<5.0		5.0	0.39	ug/L			12/28/21 14:01	1
Carbon disulfide	<5.0		5.0	0.45	ug/L			12/28/21 14:01	1
Acetone	<20		20	1.7	ug/L			12/28/21 14:01	1
Methylene Chloride	<10		10	1.6	ug/L			12/28/21 14:01	1
trans-1,2-Dichloroethene	<5.0		5.0	0.35	ug/L			12/28/21 14:01	1
1,1-Dichloroethane	<5.0		5.0	0.41	ug/L			12/28/21 14:01	1
cis-1,2-Dichloroethene	<5.0		5.0	0.41	ug/L			12/28/21 14:01	1
Methyl Ethyl Ketone	<20		20	2.1	ug/L			12/28/21 14:01	1
Chloroform	<5.0		5.0	0.37	ug/L			12/28/21 14:01	1
1,1,1-Trichloroethane	<5.0		5.0	0.38	ug/L			12/28/21 14:01	1
Carbon tetrachloride	<5.0		5.0	0.38	ug/L			12/28/21 14:01	1
1,2-Dichloroethane	<5.0		5.0	0.39	ug/L			12/28/21 14:01	1
Trichloroethene	32		5.0	0.16	ug/L			12/28/21 14:01	1
1,2-Dichloropropane	<5.0		5.0	0.43	ug/L			12/28/21 14:01	1
Bromodichloromethane	<5.0		5.0	0.37	ug/L			12/28/21 14:01	1
cis-1,3-Dichloropropene	<5.0		5.0	0.42	ug/L			12/28/21 14:01	1
methyl isobutyl ketone	<20		20	2.2	ug/L			12/28/21 14:01	1
Toluene	<5.0		5.0	0.15	ug/L			12/28/21 14:01	1
trans-1,3-Dichloropropene	<5.0		5.0	0.36	ug/L			12/28/21 14:01	1
1,1,2-Trichloroethane	<5.0		5.0	0.35	ug/L			12/28/21 14:01	1
Tetrachloroethene	64		5.0	0.37	ug/L			12/28/21 14:01	1
2-Hexanone	<20		20	1.6	ug/L			12/28/21 14:01	1
Dibromochloromethane	<5.0		5.0	0.49	ug/L			12/28/21 14:01	1
Chlorobenzene	<5.0		5.0	0.39	ug/L			12/28/21 14:01	1
Ethylbenzene	<5.0		5.0	0.18	ug/L			12/28/21 14:01	1
Styrene	<5.0		5.0	0.39	ug/L			12/28/21 14:01	1
Bromoform	<5.0		5.0	0.48	ug/L			12/28/21 14:01	1
1,1,2,2-Tetrachloroethane	<5.0		5.0	0.40	ug/L			12/28/21 14:01	1
Xylenes, Total	<5.0		5.0	0.22	ug/L			12/28/21 14:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		75 - 126		12/28/21 14:01	1
Toluene-d8 (Surr)	94		75 - 120		12/28/21 14:01	1
4-Bromofluorobenzene (Surr)	99		72 - 124		12/28/21 14:01	1
Dibromofluoromethane	111		75 - 120		12/28/21 14:01	1

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW6

Lab Sample ID: 500-209995-6

Date Collected: 12/16/21 07:55

Matrix: Water

Date Received: 12/17/21 10:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	0.15	ug/L			12/28/21 14:27	1
Chloromethane	<5.0		5.0	0.32	ug/L			12/28/21 14:27	1
Vinyl chloride	5.7		2.0	0.20	ug/L			12/28/21 14:27	1
Bromomethane	<5.0		5.0	0.80	ug/L			12/28/21 14:27	1
Chloroethane	<5.0		5.0	0.51	ug/L			12/28/21 14:27	1
1,1-Dichloroethene	<5.0		5.0	0.39	ug/L			12/28/21 14:27	1
Carbon disulfide	<5.0		5.0	0.45	ug/L			12/28/21 14:27	1
Acetone	<20		20	1.7	ug/L			12/28/21 14:27	1
Methylene Chloride	<10		10	1.6	ug/L			12/28/21 14:27	1
trans-1,2-Dichloroethene	<5.0		5.0	0.35	ug/L			12/28/21 14:27	1
1,1-Dichloroethane	6.1		5.0	0.41	ug/L			12/28/21 14:27	1
cis-1,2-Dichloroethene	15		5.0	0.41	ug/L			12/28/21 14:27	1
Methyl Ethyl Ketone	<20		20	2.1	ug/L			12/28/21 14:27	1
Chloroform	<5.0		5.0	0.37	ug/L			12/28/21 14:27	1
1,1,1-Trichloroethane	<5.0		5.0	0.38	ug/L			12/28/21 14:27	1
Carbon tetrachloride	<5.0		5.0	0.38	ug/L			12/28/21 14:27	1
1,2-Dichloroethane	<5.0		5.0	0.39	ug/L			12/28/21 14:27	1
Trichloroethene	22		5.0	0.16	ug/L			12/28/21 14:27	1
1,2-Dichloropropane	<5.0		5.0	0.43	ug/L			12/28/21 14:27	1
Bromodichloromethane	<5.0		5.0	0.37	ug/L			12/28/21 14:27	1
cis-1,3-Dichloropropene	<5.0		5.0	0.42	ug/L			12/28/21 14:27	1
methyl isobutyl ketone	<20		20	2.2	ug/L			12/28/21 14:27	1
Toluene	<5.0		5.0	0.15	ug/L			12/28/21 14:27	1
trans-1,3-Dichloropropene	<5.0		5.0	0.36	ug/L			12/28/21 14:27	1
1,1,2-Trichloroethane	<5.0		5.0	0.35	ug/L			12/28/21 14:27	1
Tetrachloroethene	22		5.0	0.37	ug/L			12/28/21 14:27	1
2-Hexanone	<20		20	1.6	ug/L			12/28/21 14:27	1
Dibromochloromethane	<5.0		5.0	0.49	ug/L			12/28/21 14:27	1
Chlorobenzene	<5.0		5.0	0.39	ug/L			12/28/21 14:27	1
Ethylbenzene	<5.0		5.0	0.18	ug/L			12/28/21 14:27	1
Styrene	<5.0		5.0	0.39	ug/L			12/28/21 14:27	1
Bromoform	<5.0		5.0	0.48	ug/L			12/28/21 14:27	1
1,1,2,2-Tetrachloroethane	<5.0		5.0	0.40	ug/L			12/28/21 14:27	1
Xylenes, Total	<5.0		5.0	0.22	ug/L			12/28/21 14:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		75 - 126		12/28/21 14:27	1
Toluene-d8 (Surr)	93		75 - 120		12/28/21 14:27	1
4-Bromofluorobenzene (Surr)	98		72 - 124		12/28/21 14:27	1
Dibromofluoromethane	112		75 - 120		12/28/21 14:27	1

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW7

Lab Sample ID: 500-209995-7

Date Collected: 12/16/21 12:20

Matrix: Water

Date Received: 12/17/21 10:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	0.15	ug/L			12/28/21 14:54	1
Chloromethane	<5.0		5.0	0.32	ug/L			12/28/21 14:54	1
Vinyl chloride	10		2.0	0.20	ug/L			12/28/21 14:54	1
Bromomethane	<5.0		5.0	0.80	ug/L			12/28/21 14:54	1
Chloroethane	<5.0		5.0	0.51	ug/L			12/28/21 14:54	1
1,1-Dichloroethene	<5.0		5.0	0.39	ug/L			12/28/21 14:54	1
Carbon disulfide	<5.0		5.0	0.45	ug/L			12/28/21 14:54	1
Acetone	<20		20	1.7	ug/L			12/28/21 14:54	1
Methylene Chloride	<10		10	1.6	ug/L			12/28/21 14:54	1
trans-1,2-Dichloroethene	<5.0		5.0	0.35	ug/L			12/28/21 14:54	1
1,1-Dichloroethane	<5.0		5.0	0.41	ug/L			12/28/21 14:54	1
cis-1,2-Dichloroethene	37		5.0	0.41	ug/L			12/28/21 14:54	1
Methyl Ethyl Ketone	<20		20	2.1	ug/L			12/28/21 14:54	1
Chloroform	<5.0		5.0	0.37	ug/L			12/28/21 14:54	1
1,1,1-Trichloroethane	<5.0		5.0	0.38	ug/L			12/28/21 14:54	1
Carbon tetrachloride	<5.0		5.0	0.38	ug/L			12/28/21 14:54	1
1,2-Dichloroethane	<5.0		5.0	0.39	ug/L			12/28/21 14:54	1
Trichloroethene	6.9		5.0	0.16	ug/L			12/28/21 14:54	1
1,2-Dichloropropane	<5.0		5.0	0.43	ug/L			12/28/21 14:54	1
Bromodichloromethane	<5.0		5.0	0.37	ug/L			12/28/21 14:54	1
cis-1,3-Dichloropropene	<5.0		5.0	0.42	ug/L			12/28/21 14:54	1
methyl isobutyl ketone	<20		20	2.2	ug/L			12/28/21 14:54	1
Toluene	<5.0		5.0	0.15	ug/L			12/28/21 14:54	1
trans-1,3-Dichloropropene	<5.0		5.0	0.36	ug/L			12/28/21 14:54	1
1,1,2-Trichloroethane	<5.0		5.0	0.35	ug/L			12/28/21 14:54	1
Tetrachloroethene	5.5		5.0	0.37	ug/L			12/28/21 14:54	1
2-Hexanone	<20		20	1.6	ug/L			12/28/21 14:54	1
Dibromochloromethane	<5.0		5.0	0.49	ug/L			12/28/21 14:54	1
Chlorobenzene	<5.0		5.0	0.39	ug/L			12/28/21 14:54	1
Ethylbenzene	<5.0		5.0	0.18	ug/L			12/28/21 14:54	1
Styrene	<5.0		5.0	0.39	ug/L			12/28/21 14:54	1
Bromoform	<5.0		5.0	0.48	ug/L			12/28/21 14:54	1
1,1,2,2-Tetrachloroethane	<5.0		5.0	0.40	ug/L			12/28/21 14:54	1
Xylenes, Total	<5.0		5.0	0.22	ug/L			12/28/21 14:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		75 - 126		12/28/21 14:54	1
Toluene-d8 (Surr)	94		75 - 120		12/28/21 14:54	1
4-Bromofluorobenzene (Surr)	100		72 - 124		12/28/21 14:54	1
Dibromofluoromethane	112		75 - 120		12/28/21 14:54	1

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW8

Lab Sample ID: 500-209995-8

Date Collected: 12/16/21 12:59

Matrix: Water

Date Received: 12/17/21 10:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	0.15	ug/L			12/28/21 15:21	1
Chloromethane	<5.0		5.0	0.32	ug/L			12/28/21 15:21	1
Vinyl chloride	<2.0		2.0	0.20	ug/L			12/28/21 15:21	1
Bromomethane	<5.0		5.0	0.80	ug/L			12/28/21 15:21	1
Chloroethane	<5.0		5.0	0.51	ug/L			12/28/21 15:21	1
1,1-Dichloroethene	<5.0		5.0	0.39	ug/L			12/28/21 15:21	1
Carbon disulfide	<5.0		5.0	0.45	ug/L			12/28/21 15:21	1
Acetone	<20		20	1.7	ug/L			12/28/21 15:21	1
Methylene Chloride	<10		10	1.6	ug/L			12/28/21 15:21	1
trans-1,2-Dichloroethene	<5.0		5.0	0.35	ug/L			12/28/21 15:21	1
1,1-Dichloroethane	20		5.0	0.41	ug/L			12/28/21 15:21	1
cis-1,2-Dichloroethene	14		5.0	0.41	ug/L			12/28/21 15:21	1
Methyl Ethyl Ketone	<20		20	2.1	ug/L			12/28/21 15:21	1
Chloroform	<5.0		5.0	0.37	ug/L			12/28/21 15:21	1
1,1,1-Trichloroethane	<5.0		5.0	0.38	ug/L			12/28/21 15:21	1
Carbon tetrachloride	<5.0		5.0	0.38	ug/L			12/28/21 15:21	1
1,2-Dichloroethane	<5.0		5.0	0.39	ug/L			12/28/21 15:21	1
Trichloroethene	14		5.0	0.16	ug/L			12/28/21 15:21	1
1,2-Dichloropropane	<5.0		5.0	0.43	ug/L			12/28/21 15:21	1
Bromodichloromethane	<5.0		5.0	0.37	ug/L			12/28/21 15:21	1
cis-1,3-Dichloropropene	<5.0		5.0	0.42	ug/L			12/28/21 15:21	1
methyl isobutyl ketone	<20		20	2.2	ug/L			12/28/21 15:21	1
Toluene	<5.0		5.0	0.15	ug/L			12/28/21 15:21	1
trans-1,3-Dichloropropene	<5.0		5.0	0.36	ug/L			12/28/21 15:21	1
1,1,2-Trichloroethane	<5.0		5.0	0.35	ug/L			12/28/21 15:21	1
Tetrachloroethene	12		5.0	0.37	ug/L			12/28/21 15:21	1
2-Hexanone	<20		20	1.6	ug/L			12/28/21 15:21	1
Dibromochloromethane	<5.0		5.0	0.49	ug/L			12/28/21 15:21	1
Chlorobenzene	<5.0		5.0	0.39	ug/L			12/28/21 15:21	1
Ethylbenzene	<5.0		5.0	0.18	ug/L			12/28/21 15:21	1
Styrene	<5.0		5.0	0.39	ug/L			12/28/21 15:21	1
Bromoform	<5.0		5.0	0.48	ug/L			12/28/21 15:21	1
1,1,2,2-Tetrachloroethane	<5.0		5.0	0.40	ug/L			12/28/21 15:21	1
Xylenes, Total	<5.0		5.0	0.22	ug/L			12/28/21 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		75 - 126		12/28/21 15:21	1
Toluene-d8 (Surr)	94		75 - 120		12/28/21 15:21	1
4-Bromofluorobenzene (Surr)	99		72 - 124		12/28/21 15:21	1
Dibromofluoromethane	111		75 - 120		12/28/21 15:21	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW9

Lab Sample ID: 500-209995-9

Date Collected: 12/16/21 13:10

Matrix: Water

Date Received: 12/17/21 10:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	0.15	ug/L			12/28/21 15:48	1
Chloromethane	<5.0		5.0	0.32	ug/L			12/28/21 15:48	1
Vinyl chloride	<2.0		2.0	0.20	ug/L			12/28/21 15:48	1
Bromomethane	<5.0		5.0	0.80	ug/L			12/28/21 15:48	1
Chloroethane	<5.0		5.0	0.51	ug/L			12/28/21 15:48	1
1,1-Dichloroethene	<5.0		5.0	0.39	ug/L			12/28/21 15:48	1
Carbon disulfide	<5.0		5.0	0.45	ug/L			12/28/21 15:48	1
Acetone	<20		20	1.7	ug/L			12/28/21 15:48	1
Methylene Chloride	<10		10	1.6	ug/L			12/28/21 15:48	1
trans-1,2-Dichloroethene	<5.0		5.0	0.35	ug/L			12/28/21 15:48	1
1,1-Dichloroethane	13		5.0	0.41	ug/L			12/28/21 15:48	1
cis-1,2-Dichloroethene	<5.0		5.0	0.41	ug/L			12/28/21 15:48	1
Methyl Ethyl Ketone	<20		20	2.1	ug/L			12/28/21 15:48	1
Chloroform	<5.0		5.0	0.37	ug/L			12/28/21 15:48	1
1,1,1-Trichloroethane	<5.0		5.0	0.38	ug/L			12/28/21 15:48	1
Carbon tetrachloride	<5.0		5.0	0.38	ug/L			12/28/21 15:48	1
1,2-Dichloroethane	<5.0		5.0	0.39	ug/L			12/28/21 15:48	1
Trichloroethene	<5.0		5.0	0.16	ug/L			12/28/21 15:48	1
1,2-Dichloropropane	<5.0		5.0	0.43	ug/L			12/28/21 15:48	1
Bromodichloromethane	<5.0		5.0	0.37	ug/L			12/28/21 15:48	1
cis-1,3-Dichloropropene	<5.0		5.0	0.42	ug/L			12/28/21 15:48	1
methyl isobutyl ketone	<20		20	2.2	ug/L			12/28/21 15:48	1
Toluene	<5.0		5.0	0.15	ug/L			12/28/21 15:48	1
trans-1,3-Dichloropropene	<5.0		5.0	0.36	ug/L			12/28/21 15:48	1
1,1,2-Trichloroethane	<5.0		5.0	0.35	ug/L			12/28/21 15:48	1
Tetrachloroethene	<5.0		5.0	0.37	ug/L			12/28/21 15:48	1
2-Hexanone	<20		20	1.6	ug/L			12/28/21 15:48	1
Dibromochloromethane	<5.0		5.0	0.49	ug/L			12/28/21 15:48	1
Chlorobenzene	<5.0		5.0	0.39	ug/L			12/28/21 15:48	1
Ethylbenzene	<5.0		5.0	0.18	ug/L			12/28/21 15:48	1
Styrene	<5.0		5.0	0.39	ug/L			12/28/21 15:48	1
Bromoform	<5.0		5.0	0.48	ug/L			12/28/21 15:48	1
1,1,2,2-Tetrachloroethane	<5.0		5.0	0.40	ug/L			12/28/21 15:48	1
Xylenes, Total	<5.0		5.0	0.22	ug/L			12/28/21 15:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		75 - 126		12/28/21 15:48	1
Toluene-d8 (Surr)	94		75 - 120		12/28/21 15:48	1
4-Bromofluorobenzene (Surr)	98		72 - 124		12/28/21 15:48	1
Dibromofluoromethane	112		75 - 120		12/28/21 15:48	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC FB

Lab Sample ID: 500-209995-10

Date Collected: 12/16/21 13:30

Matrix: Water

Date Received: 12/17/21 10:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	0.15	ug/L			12/28/21 16:14	1
Chloromethane	<5.0		5.0	0.32	ug/L			12/28/21 16:14	1
Vinyl chloride	<2.0		2.0	0.20	ug/L			12/28/21 16:14	1
Bromomethane	<5.0		5.0	0.80	ug/L			12/28/21 16:14	1
Chloroethane	<5.0		5.0	0.51	ug/L			12/28/21 16:14	1
1,1-Dichloroethene	<5.0		5.0	0.39	ug/L			12/28/21 16:14	1
Carbon disulfide	<5.0		5.0	0.45	ug/L			12/28/21 16:14	1
Acetone	<20		20	1.7	ug/L			12/28/21 16:14	1
Methylene Chloride	<10		10	1.6	ug/L			12/28/21 16:14	1
trans-1,2-Dichloroethene	<5.0		5.0	0.35	ug/L			12/28/21 16:14	1
1,1-Dichloroethane	<5.0		5.0	0.41	ug/L			12/28/21 16:14	1
cis-1,2-Dichloroethene	<5.0		5.0	0.41	ug/L			12/28/21 16:14	1
Methyl Ethyl Ketone	<20		20	2.1	ug/L			12/28/21 16:14	1
Chloroform	<5.0		5.0	0.37	ug/L			12/28/21 16:14	1
1,1,1-Trichloroethane	<5.0		5.0	0.38	ug/L			12/28/21 16:14	1
Carbon tetrachloride	<5.0		5.0	0.38	ug/L			12/28/21 16:14	1
1,2-Dichloroethane	<5.0		5.0	0.39	ug/L			12/28/21 16:14	1
Trichloroethene	<5.0		5.0	0.16	ug/L			12/28/21 16:14	1
1,2-Dichloropropane	<5.0		5.0	0.43	ug/L			12/28/21 16:14	1
Bromodichloromethane	<5.0		5.0	0.37	ug/L			12/28/21 16:14	1
cis-1,3-Dichloropropene	<5.0		5.0	0.42	ug/L			12/28/21 16:14	1
methyl isobutyl ketone	<20		20	2.2	ug/L			12/28/21 16:14	1
Toluene	5.2		5.0	0.15	ug/L			12/28/21 16:14	1
trans-1,3-Dichloropropene	<5.0		5.0	0.36	ug/L			12/28/21 16:14	1
1,1,2-Trichloroethane	<5.0		5.0	0.35	ug/L			12/28/21 16:14	1
Tetrachloroethene	<5.0		5.0	0.37	ug/L			12/28/21 16:14	1
2-Hexanone	<20		20	1.6	ug/L			12/28/21 16:14	1
Dibromochloromethane	<5.0		5.0	0.49	ug/L			12/28/21 16:14	1
Chlorobenzene	<5.0		5.0	0.39	ug/L			12/28/21 16:14	1
Ethylbenzene	<5.0		5.0	0.18	ug/L			12/28/21 16:14	1
Styrene	<5.0		5.0	0.39	ug/L			12/28/21 16:14	1
Bromoform	<5.0		5.0	0.48	ug/L			12/28/21 16:14	1
1,1,2,2-Tetrachloroethane	<5.0		5.0	0.40	ug/L			12/28/21 16:14	1
Xylenes, Total	<5.0		5.0	0.22	ug/L			12/28/21 16:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		75 - 126		12/28/21 16:14	1
Toluene-d8 (Surr)	94		75 - 120		12/28/21 16:14	1
4-Bromofluorobenzene (Surr)	98		72 - 124		12/28/21 16:14	1
Dibromofluoromethane	113		75 - 120		12/28/21 16:14	1

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: Trip Blank

Lab Sample ID: 500-209995-11

Date Collected: 12/16/21 00:00

Matrix: Water

Date Received: 12/17/21 10:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	0.15	ug/L			12/28/21 11:47	1
Chloromethane	<5.0		5.0	0.32	ug/L			12/28/21 11:47	1
Vinyl chloride	<2.0		2.0	0.20	ug/L			12/28/21 11:47	1
Bromomethane	<5.0		5.0	0.80	ug/L			12/28/21 11:47	1
Chloroethane	<5.0		5.0	0.51	ug/L			12/28/21 11:47	1
1,1-Dichloroethene	<5.0		5.0	0.39	ug/L			12/28/21 11:47	1
Carbon disulfide	<5.0		5.0	0.45	ug/L			12/28/21 11:47	1
Acetone	<20		20	1.7	ug/L			12/28/21 11:47	1
Methylene Chloride	<10		10	1.6	ug/L			12/28/21 11:47	1
trans-1,2-Dichloroethene	<5.0		5.0	0.35	ug/L			12/28/21 11:47	1
1,1-Dichloroethane	<5.0		5.0	0.41	ug/L			12/28/21 11:47	1
cis-1,2-Dichloroethene	<5.0		5.0	0.41	ug/L			12/28/21 11:47	1
Methyl Ethyl Ketone	<20		20	2.1	ug/L			12/28/21 11:47	1
Chloroform	<5.0		5.0	0.37	ug/L			12/28/21 11:47	1
1,1,1-Trichloroethane	<5.0		5.0	0.38	ug/L			12/28/21 11:47	1
Carbon tetrachloride	<5.0		5.0	0.38	ug/L			12/28/21 11:47	1
1,2-Dichloroethane	<5.0		5.0	0.39	ug/L			12/28/21 11:47	1
Trichloroethene	<5.0		5.0	0.16	ug/L			12/28/21 11:47	1
1,2-Dichloropropane	<5.0		5.0	0.43	ug/L			12/28/21 11:47	1
Bromodichloromethane	<5.0		5.0	0.37	ug/L			12/28/21 11:47	1
cis-1,3-Dichloropropene	<5.0		5.0	0.42	ug/L			12/28/21 11:47	1
methyl isobutyl ketone	<20		20	2.2	ug/L			12/28/21 11:47	1
Toluene	<5.0		5.0	0.15	ug/L			12/28/21 11:47	1
trans-1,3-Dichloropropene	<5.0		5.0	0.36	ug/L			12/28/21 11:47	1
1,1,2-Trichloroethane	<5.0		5.0	0.35	ug/L			12/28/21 11:47	1
Tetrachloroethene	<5.0		5.0	0.37	ug/L			12/28/21 11:47	1
2-Hexanone	<20		20	1.6	ug/L			12/28/21 11:47	1
Dibromochloromethane	<5.0		5.0	0.49	ug/L			12/28/21 11:47	1
Chlorobenzene	<5.0		5.0	0.39	ug/L			12/28/21 11:47	1
Ethylbenzene	<5.0		5.0	0.18	ug/L			12/28/21 11:47	1
Styrene	<5.0		5.0	0.39	ug/L			12/28/21 11:47	1
Bromoform	<5.0		5.0	0.48	ug/L			12/28/21 11:47	1
1,1,2,2-Tetrachloroethane	<5.0		5.0	0.40	ug/L			12/28/21 11:47	1
Xylenes, Total	<5.0		5.0	0.22	ug/L			12/28/21 11:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		75 - 126		12/28/21 11:47	1
Toluene-d8 (Surr)	94		75 - 120		12/28/21 11:47	1
4-Bromofluorobenzene (Surr)	97		72 - 124		12/28/21 11:47	1
Dibromofluoromethane	109		75 - 120		12/28/21 11:47	1

Definitions/Glossary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

GC/MS VOA

Analysis Batch: 635673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-209995-1	IPC GW MW1	Total/NA	Water	8260B	
500-209995-2	IPC GW MW2	Total/NA	Water	8260B	
500-209995-3	IPC GW MW3	Total/NA	Water	8260B	
500-209995-4	IPC GW MW4	Total/NA	Water	8260B	
500-209995-5	IPC GW MW5	Total/NA	Water	8260B	
500-209995-6	IPC GW MW6	Total/NA	Water	8260B	
500-209995-7	IPC GW MW7	Total/NA	Water	8260B	
500-209995-8	IPC GW MW8	Total/NA	Water	8260B	
500-209995-9	IPC GW MW9	Total/NA	Water	8260B	
500-209995-10	IPC FB	Total/NA	Water	8260B	
500-209995-11	Trip Blank	Total/NA	Water	8260B	
MB 500-635673/6	Method Blank	Total/NA	Water	8260B	
LCS 500-635673/4	Lab Control Sample	Total/NA	Water	8260B	
500-209995-5 MS	IPC GW MW5	Total/NA	Water	8260B	
500-209995-5 MSD	IPC GW MW5	Total/NA	Water	8260B	

Surrogate Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (75-126)	TOL (75-120)	BFB (72-124)	DBFM (75-120)
500-209995-1	IPC GW MW1	117	94	98	110
500-209995-2	IPC GW MW2	118	94	99	110
500-209995-3	IPC GW MW3	120	94	99	112
500-209995-4	IPC GW MW4	119	93	99	111
500-209995-5	IPC GW MW5	118	94	99	111
500-209995-5 MS	IPC GW MW5	115	96	101	106
500-209995-5 MSD	IPC GW MW5	115	95	100	106
500-209995-6	IPC GW MW6	120	93	98	112
500-209995-7	IPC GW MW7	120	94	100	112
500-209995-8	IPC GW MW8	120	94	99	111
500-209995-9	IPC GW MW9	118	94	98	112
500-209995-10	IPC FB	120	94	98	113
500-209995-11	Trip Blank	116	94	97	109
LCS 500-635673/4	Lab Control Sample	113	96	102	106
MB 500-635673/6	Method Blank	118	95	101	110

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane

QC Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-635673/6

Matrix: Water

Analysis Batch: 635673

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	0.15	ug/L			12/28/21 11:21	1
Chloromethane	<5.0		5.0	0.32	ug/L			12/28/21 11:21	1
Vinyl chloride	<2.0		2.0	0.20	ug/L			12/28/21 11:21	1
Bromomethane	<5.0		5.0	0.80	ug/L			12/28/21 11:21	1
Chloroethane	<5.0		5.0	0.51	ug/L			12/28/21 11:21	1
1,1-Dichloroethene	<5.0		5.0	0.39	ug/L			12/28/21 11:21	1
Carbon disulfide	<5.0		5.0	0.45	ug/L			12/28/21 11:21	1
Acetone	<20		20	1.7	ug/L			12/28/21 11:21	1
Methylene Chloride	<10		10	1.6	ug/L			12/28/21 11:21	1
trans-1,2-Dichloroethene	<5.0		5.0	0.35	ug/L			12/28/21 11:21	1
1,1-Dichloroethane	<5.0		5.0	0.41	ug/L			12/28/21 11:21	1
cis-1,2-Dichloroethene	<5.0		5.0	0.41	ug/L			12/28/21 11:21	1
Methyl Ethyl Ketone	<20		20	2.1	ug/L			12/28/21 11:21	1
Chloroform	<5.0		5.0	0.37	ug/L			12/28/21 11:21	1
1,1,1-Trichloroethane	<5.0		5.0	0.38	ug/L			12/28/21 11:21	1
Carbon tetrachloride	<5.0		5.0	0.38	ug/L			12/28/21 11:21	1
1,2-Dichloroethane	<5.0		5.0	0.39	ug/L			12/28/21 11:21	1
Trichloroethene	<5.0		5.0	0.16	ug/L			12/28/21 11:21	1
1,2-Dichloropropane	<5.0		5.0	0.43	ug/L			12/28/21 11:21	1
Bromodichloromethane	<5.0		5.0	0.37	ug/L			12/28/21 11:21	1
cis-1,3-Dichloropropene	<5.0		5.0	0.42	ug/L			12/28/21 11:21	1
methyl isobutyl ketone	<20		20	2.2	ug/L			12/28/21 11:21	1
Toluene	<5.0		5.0	0.15	ug/L			12/28/21 11:21	1
trans-1,3-Dichloropropene	<5.0		5.0	0.36	ug/L			12/28/21 11:21	1
1,1,2-Trichloroethane	<5.0		5.0	0.35	ug/L			12/28/21 11:21	1
Tetrachloroethene	<5.0		5.0	0.37	ug/L			12/28/21 11:21	1
2-Hexanone	<20		20	1.6	ug/L			12/28/21 11:21	1
Dibromochloromethane	<5.0		5.0	0.49	ug/L			12/28/21 11:21	1
Chlorobenzene	<5.0		5.0	0.39	ug/L			12/28/21 11:21	1
Ethylbenzene	<5.0		5.0	0.18	ug/L			12/28/21 11:21	1
Styrene	<5.0		5.0	0.39	ug/L			12/28/21 11:21	1
Bromoform	<5.0		5.0	0.48	ug/L			12/28/21 11:21	1
1,1,2,2-Tetrachloroethane	<5.0		5.0	0.40	ug/L			12/28/21 11:21	1
Xylenes, Total	<5.0		5.0	0.22	ug/L			12/28/21 11:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		75 - 126		12/28/21 11:21	1
Toluene-d8 (Surr)	95		75 - 120		12/28/21 11:21	1
4-Bromofluorobenzene (Surr)	101		72 - 124		12/28/21 11:21	1
Dibromofluoromethane	110		75 - 120		12/28/21 11:21	1

Lab Sample ID: LCS 500-635673/4

Matrix: Water

Analysis Batch: 635673

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	40.3		ug/L		81	70 - 120
Chloromethane	50.0	54.0		ug/L		108	56 - 152

Eurofins TestAmerica, Chicago

QC Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-635673/4

Matrix: Water

Analysis Batch: 635673

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	50.0	53.3		ug/L		107	64 - 126
Bromomethane	50.0	41.8		ug/L		84	40 - 152
Chloroethane	50.0	46.3		ug/L		93	48 - 136
1,1-Dichloroethene	50.0	44.1		ug/L		88	67 - 122
Carbon disulfide	50.0	42.2		ug/L		84	66 - 120
Acetone	50.0	50.4		ug/L		101	40 - 143
Methylene Chloride	50.0	44.6		ug/L		89	69 - 125
trans-1,2-Dichloroethene	50.0	44.0		ug/L		88	70 - 125
1,1-Dichloroethane	50.0	49.3		ug/L		99	70 - 125
cis-1,2-Dichloroethene	50.0	44.0		ug/L		88	70 - 125
Methyl Ethyl Ketone	50.0	61.6		ug/L		123	46 - 144
Chloroform	50.0	44.4		ug/L		89	70 - 120
1,1,1-Trichloroethane	50.0	45.6		ug/L		91	70 - 125
Carbon tetrachloride	50.0	49.3		ug/L		99	59 - 133
1,2-Dichloroethane	50.0	55.2		ug/L		110	68 - 127
Trichloroethene	50.0	50.2		ug/L		100	70 - 125
1,2-Dichloropropane	50.0	48.8		ug/L		98	67 - 130
Bromodichloromethane	50.0	46.0		ug/L		92	69 - 120
cis-1,3-Dichloropropene	50.0	39.1		ug/L		78	64 - 127
methyl isobutyl ketone	50.0	59.3		ug/L		119	55 - 139
Toluene	50.0	43.1		ug/L		86	70 - 125
trans-1,3-Dichloropropene	50.0	40.1		ug/L		80	62 - 128
1,1,2-Trichloroethane	50.0	43.1		ug/L		86	71 - 130
Tetrachloroethene	50.0	51.9		ug/L		104	70 - 128
2-Hexanone	50.0	60.2		ug/L		120	54 - 146
Dibromochloromethane	50.0	51.0		ug/L		102	68 - 125
Chlorobenzene	50.0	47.0		ug/L		94	70 - 120
Ethylbenzene	50.0	44.2		ug/L		88	70 - 123
Styrene	50.0	47.5		ug/L		95	70 - 120
Bromoform	50.0	49.1		ug/L		98	56 - 132
1,1,2,2-Tetrachloroethane	50.0	53.5		ug/L		107	62 - 140
Xylenes, Total	100	87.4		ug/L		87	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	113		75 - 126
Toluene-d8 (Surr)	96		75 - 120
4-Bromofluorobenzene (Surr)	102		72 - 124
Dibromofluoromethane	106		75 - 120

Lab Sample ID: 500-209995-5 MS

Matrix: Water

Analysis Batch: 635673

Client Sample ID: IPC GW MW5

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<5.0		50.0	41.0		ug/L		82	70 - 120
Chloromethane	<5.0		50.0	55.4		ug/L		111	56 - 152
Vinyl chloride	<2.0		50.0	54.7		ug/L		109	64 - 126
Bromomethane	<5.0		50.0	41.9		ug/L		84	40 - 152

Eurofins TestAmerica, Chicago

QC Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 500-209995-5 MS

Matrix: Water

Analysis Batch: 635673

Client Sample ID: IPC GW MW5

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	<5.0		50.0	47.7		ug/L		95	48 - 136
1,1-Dichloroethene	<5.0		50.0	44.1		ug/L		88	67 - 122
Carbon disulfide	<5.0		50.0	41.2		ug/L		82	66 - 120
Acetone	<20		50.0	39.5		ug/L		79	40 - 143
Methylene Chloride	<10		50.0	45.4		ug/L		91	69 - 125
trans-1,2-Dichloroethene	<5.0		50.0	44.3		ug/L		89	70 - 125
1,1-Dichloroethane	<5.0		50.0	50.0		ug/L		98	70 - 125
cis-1,2-Dichloroethene	<5.0		50.0	47.3		ug/L		89	70 - 125
Methyl Ethyl Ketone	<20		50.0	55.5		ug/L		111	46 - 144
Chloroform	<5.0		50.0	45.5		ug/L		91	70 - 120
1,1,1-Trichloroethane	<5.0		50.0	47.1		ug/L		92	70 - 125
Carbon tetrachloride	<5.0		50.0	49.4		ug/L		99	59 - 133
1,2-Dichloroethane	<5.0		50.0	56.2		ug/L		112	68 - 127
Trichloroethene	32		50.0	80.7		ug/L		96	70 - 125
1,2-Dichloropropane	<5.0		50.0	49.7		ug/L		99	67 - 130
Bromodichloromethane	<5.0		50.0	45.8		ug/L		92	69 - 120
cis-1,3-Dichloropropene	<5.0		50.0	38.5		ug/L		77	64 - 127
methyl isobutyl ketone	<20		50.0	53.0		ug/L		106	55 - 139
Toluene	<5.0		50.0	43.2		ug/L		86	70 - 125
trans-1,3-Dichloropropene	<5.0		50.0	39.0		ug/L		78	62 - 128
1,1,2-Trichloroethane	<5.0		50.0	43.7		ug/L		87	71 - 130
Tetrachloroethene	64		50.0	115		ug/L		102	70 - 128
2-Hexanone	<20		50.0	53.2		ug/L		106	54 - 146
Dibromochloromethane	<5.0		50.0	50.6		ug/L		101	68 - 125
Chlorobenzene	<5.0		50.0	47.0		ug/L		94	70 - 120
Ethylbenzene	<5.0		50.0	44.2		ug/L		88	70 - 123
Styrene	<5.0		50.0	46.9		ug/L		94	70 - 120
Bromoform	<5.0		50.0	46.7		ug/L		93	56 - 132
1,1,2,2-Tetrachloroethane	<5.0		50.0	50.3		ug/L		101	62 - 140
Xylenes, Total	<5.0		100	87.2		ug/L		87	70 - 125

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	115		75 - 126
Toluene-d8 (Surr)	96		75 - 120
4-Bromofluorobenzene (Surr)	101		72 - 124
Dibromofluoromethane	106		75 - 120

Lab Sample ID: 500-209995-5 MSD

Matrix: Water

Analysis Batch: 635673

Client Sample ID: IPC GW MW5

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<5.0		50.0	39.0		ug/L		78	70 - 120	5	20
Chloromethane	<5.0		50.0	52.3		ug/L		105	56 - 152	6	20
Vinyl chloride	<2.0		50.0	52.7		ug/L		105	64 - 126	4	20
Bromomethane	<5.0		50.0	40.7		ug/L		81	40 - 152	3	20
Chloroethane	<5.0		50.0	46.0		ug/L		92	48 - 136	4	20
1,1-Dichloroethene	<5.0		50.0	42.7		ug/L		85	67 - 122	3	20

Eurofins TestAmerica, Chicago

QC Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 500-209995-5 MSD

Matrix: Water

Analysis Batch: 635673

Client Sample ID: IPC GW MW5

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon disulfide	<5.0		50.0	40.0		ug/L		80	66 - 120	3	20
Acetone	<20		50.0	41.5		ug/L		83	40 - 143	5	20
Methylene Chloride	<10		50.0	43.5		ug/L		87	69 - 125	4	20
trans-1,2-Dichloroethene	<5.0		50.0	42.4		ug/L		85	70 - 125	4	20
1,1-Dichloroethane	<5.0		50.0	48.9		ug/L		96	70 - 125	2	20
cis-1,2-Dichloroethene	<5.0		50.0	46.0		ug/L		87	70 - 125	3	20
Methyl Ethyl Ketone	<20		50.0	56.1		ug/L		112	46 - 144	1	20
Chloroform	<5.0		50.0	44.2		ug/L		88	70 - 120	3	20
1,1,1-Trichloroethane	<5.0		50.0	45.7		ug/L		89	70 - 125	3	20
Carbon tetrachloride	<5.0		50.0	47.6		ug/L		95	59 - 133	4	20
1,2-Dichloroethane	<5.0		50.0	54.7		ug/L		109	68 - 127	3	20
Trichloroethene	32		50.0	78.4		ug/L		92	70 - 125	3	20
1,2-Dichloropropane	<5.0		50.0	48.3		ug/L		97	67 - 130	3	20
Bromodichloromethane	<5.0		50.0	45.0		ug/L		90	69 - 120	2	20
cis-1,3-Dichloropropene	<5.0		50.0	37.6		ug/L		75	64 - 127	2	20
methyl isobutyl ketone	<20		50.0	56.9		ug/L		114	55 - 139	7	20
Toluene	<5.0		50.0	42.2		ug/L		84	70 - 125	2	20
trans-1,3-Dichloropropene	<5.0		50.0	39.0		ug/L		78	62 - 128	0	20
1,1,2-Trichloroethane	<5.0		50.0	42.8		ug/L		86	71 - 130	2	20
Tetrachloroethene	64		50.0	111		ug/L		94	70 - 128	3	20
2-Hexanone	<20		50.0	56.4		ug/L		113	54 - 146	6	20
Dibromochloromethane	<5.0		50.0	48.8		ug/L		98	68 - 125	4	20
Chlorobenzene	<5.0		50.0	45.4		ug/L		91	70 - 120	3	20
Ethylbenzene	<5.0		50.0	42.6		ug/L		85	70 - 123	4	20
Styrene	<5.0		50.0	45.3		ug/L		91	70 - 120	3	20
Bromoform	<5.0		50.0	46.2		ug/L		92	56 - 132	1	20
1,1,2,2-Tetrachloroethane	<5.0		50.0	49.4		ug/L		99	62 - 140	2	20
Xylenes, Total	<5.0		100	84.3		ug/L		84	70 - 125	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	115		75 - 126
Toluene-d8 (Surr)	95		75 - 120
4-Bromofluorobenzene (Surr)	100		72 - 124
Dibromofluoromethane	106		75 - 120

Lab Chronicle

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW1

Date Collected: 12/16/21 11:50

Date Received: 12/17/21 10:50

Lab Sample ID: 500-209995-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	635673	12/28/21 12:14	JDD	TAL CHI

Client Sample ID: IPC GW MW2

Date Collected: 12/16/21 11:20

Date Received: 12/17/21 10:50

Lab Sample ID: 500-209995-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	635673	12/28/21 12:41	JDD	TAL CHI

Client Sample ID: IPC GW MW3

Date Collected: 12/16/21 10:20

Date Received: 12/17/21 10:50

Lab Sample ID: 500-209995-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	635673	12/28/21 13:07	JDD	TAL CHI

Client Sample ID: IPC GW MW4

Date Collected: 12/16/21 09:30

Date Received: 12/17/21 10:50

Lab Sample ID: 500-209995-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	635673	12/28/21 13:34	JDD	TAL CHI

Client Sample ID: IPC GW MW5

Date Collected: 12/16/21 07:25

Date Received: 12/17/21 10:50

Lab Sample ID: 500-209995-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	635673	12/28/21 14:01	JDD	TAL CHI

Client Sample ID: IPC GW MW6

Date Collected: 12/16/21 07:55

Date Received: 12/17/21 10:50

Lab Sample ID: 500-209995-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	635673	12/28/21 14:27	JDD	TAL CHI

Client Sample ID: IPC GW MW7

Date Collected: 12/16/21 12:20

Date Received: 12/17/21 10:50

Lab Sample ID: 500-209995-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	635673	12/28/21 14:54	JDD	TAL CHI

Lab Chronicle

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Client Sample ID: IPC GW MW8

Date Collected: 12/16/21 12:59

Date Received: 12/17/21 10:50

Lab Sample ID: 500-209995-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	635673	12/28/21 15:21	JDD	TAL CHI

Client Sample ID: IPC GW MW9

Date Collected: 12/16/21 13:10

Date Received: 12/17/21 10:50

Lab Sample ID: 500-209995-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	635673	12/28/21 15:48	JDD	TAL CHI

Client Sample ID: IPC FB

Date Collected: 12/16/21 13:30

Date Received: 12/17/21 10:50

Lab Sample ID: 500-209995-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	635673	12/28/21 16:14	JDD	TAL CHI

Client Sample ID: Trip Blank

Date Collected: 12/16/21 00:00

Date Received: 12/17/21 10:50

Lab Sample ID: 500-209995-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	635673	12/28/21 11:47	JDD	TAL CHI

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-209995-1

Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	IL00035	04-29-22

Chain of Custody Record

545824


 Environment Testing
TestAmerica

TAL-8210

Address _____

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

Client Contact		Project Manager		Site Contact		Date		COC No	
Company Name <u>E-L-IPC</u>		Tel/Email		Lab Contact <u>Richard Wright</u>		Carrier		_____ of _____ COCs	
Address		Analysis Turnaround Time		Filtered Sample (Y/N) Perform MS/MSD (Y/N)		 500-209995 COC		Sampler	
City/State/Zip		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS						For Lab Use Only	
Phone		TAT if different from Below _____						Walk-in Client	
Fax		<input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day						Lab Sampling	
Project Name <u>Interstate Pollution Control Site</u>								Job / SDG No	
Site <u>50001225</u>								<u>500-209995</u>	
P O #									
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes		
1 IPC GW MW1		12/6/21	1150	G		3			
2 IPC GW MW2			1100			1			
3 IPC GW MW3			1020			1			
4 IPC GW MW4			930			1			
5 IPC GW MW5			725			9			
6 IPC GW MW6			755			3			
7 IPC GW MW7			1000			1			
8 IPC GW MW8			1259			1			
9 IPC GW MW9			1310			1			
10 IPC FB			1330			1			
11 Trip Blank							Added by TA		
Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other _____									
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<input type="checkbox"/> Non Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months			
Special Instructions/QC Requirements & Comments:									
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temp (°C) Obs'd <u>1.8</u> Corr'd <u>0.8</u>		Therm ID No			
Relinquished by <u>[Signature]</u>		Company <u>Cabeno</u>		Date/Time <u>12/6/21/1730</u>		Received by		Company	
Relinquished by		Company		Date/Time		Received by		Company	
Relinquished by		Company		Date/Time		Received in Laboratory by <u>[Signature]</u>		Company <u>ETA</u>	
								Date/Time <u>12/17/21 1050</u>	

Login Sample Receipt Checklist

Client: Environmental Information Logistics (EIL)

Job Number: 500-209995-1

Login Number: 209995

List Source: Eurofins TestAmerica, Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-210799-1

Client Project/Site: Interstate Pollution Control Site

For:

Environmental Information Logistics (EIL)
534 Duane Street
Glen Ellyn, Illinois 60137

Attn: Ms. Mary Pearson



Authorized for release by:
1/24/2022 4:15:14 PM

Richard Wright, Senior Project Manager
(708)746-0045

Richard.Wright@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

Job ID: 500-210799-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative 500-210799-1

Receipt

The samples were received on 1/12/2022 10:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was -0.6° C.

Receipt Exceptions

A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC). Added to COC.

GC/MS VOA

Method 8260B: The following sample(s) was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed within the 7-day holding time specified for unpreserved samples: MW8 (500-210799-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

Client Sample ID: MW8

Lab Sample ID: 500-210799-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	19		1.0	0.41	ug/L	1		8260B	Total/NA

Client Sample ID: Dup

Lab Sample ID: 500-210799-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	19		1.0	0.41	ug/L	1		8260B	Total/NA

Client Sample ID: Trip Blank

Lab Sample ID: 500-210799-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Method Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
5030B	Purge and Trap	SW846	TAL CHI

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-210799-1	MW8	Water	01/11/22 10:00	01/12/22 10:15
500-210799-2	Dup	Water	01/11/22 10:05	01/12/22 10:15
500-210799-3	Trip Blank	Water	01/11/22 00:00	01/12/22 10:15

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

Client Sample ID: MW8

Lab Sample ID: 500-210799-1

Date Collected: 01/11/22 10:00

Matrix: Water

Date Received: 01/12/22 10:15

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	19		1.0	0.41	ug/L			01/14/22 14:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		75 - 126		01/14/22 14:49	1
Toluene-d8 (Surr)	95		75 - 120		01/14/22 14:49	1
4-Bromofluorobenzene (Surr)	99		72 - 124		01/14/22 14:49	1
Dibromofluoromethane (Surr)	110		75 - 120		01/14/22 14:49	1

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

Client Sample ID: Dup

Lab Sample ID: 500-210799-2

Date Collected: 01/11/22 10:05

Matrix: Water

Date Received: 01/12/22 10:15

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	19		1.0	0.41	ug/L			01/14/22 15:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		75 - 126					01/14/22 15:16	1
Toluene-d8 (Surr)	95		75 - 120					01/14/22 15:16	1
4-Bromofluorobenzene (Surr)	100		72 - 124					01/14/22 15:16	1
Dibromofluoromethane (Surr)	111		75 - 120					01/14/22 15:16	1

Client Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

Client Sample ID: Trip Blank

Lab Sample ID: 500-210799-3

Date Collected: 01/11/22 00:00

Matrix: Water

Date Received: 01/12/22 10:15

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	<1.0		1.0	0.41	ug/L			01/14/22 15:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		75 - 126					01/14/22 15:42	1
Toluene-d8 (Surr)	95		75 - 120					01/14/22 15:42	1
4-Bromofluorobenzene (Surr)	100		72 - 124					01/14/22 15:42	1
Dibromofluoromethane (Surr)	109		75 - 120					01/14/22 15:42	1

Definitions/Glossary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

GC/MS VOA

Analysis Batch: 637792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-210799-1	MW8	Total/NA	Water	8260B	
500-210799-2	Dup	Total/NA	Water	8260B	
500-210799-3	Trip Blank	Total/NA	Water	8260B	
MB 500-637792/6	Method Blank	Total/NA	Water	8260B	
LCS 500-637792/4	Lab Control Sample	Total/NA	Water	8260B	
500-210799-2 MS	Dup	Total/NA	Water	8260B	
500-210799-2 MSD	Dup	Total/NA	Water	8260B	

Surrogate Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA	TOL	BFB	DBFM
		(75-126)	(75-120)	(72-124)	(75-120)
500-210799-1	MW8	119	95	99	110
500-210799-2	Dup	120	95	100	111
500-210799-2 MS	Dup	115	95	98	106
500-210799-2 MSD	Dup	116	95	102	107
500-210799-3	Trip Blank	119	95	100	109
LCS 500-637792/4	Lab Control Sample	113	95	101	106
MB 500-637792/6	Method Blank	114	93	100	107

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-637792/6

Matrix: Water

Analysis Batch: 637792

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	<1.0		1.0	0.41	ug/L			01/14/22 11:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		75 - 126					01/14/22 11:16	1
Toluene-d8 (Surr)	93		75 - 120					01/14/22 11:16	1
4-Bromofluorobenzene (Surr)	100		72 - 124					01/14/22 11:16	1
Dibromofluoromethane (Surr)	107		75 - 120					01/14/22 11:16	1

Lab Sample ID: LCS 500-637792/4

Matrix: Water

Analysis Batch: 637792

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	50.0	50.3		ug/L		101	70 - 125
Surrogate	%Recovery	Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	113		75 - 126				
Toluene-d8 (Surr)	95		75 - 120				
4-Bromofluorobenzene (Surr)	101		72 - 124				
Dibromofluoromethane (Surr)	106		75 - 120				

Lab Sample ID: 500-210799-2 MS

Matrix: Water

Analysis Batch: 637792

Client Sample ID: Dup

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	19		50.0	62.4		ug/L		87	70 - 125
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	115		75 - 126						
Toluene-d8 (Surr)	95		75 - 120						
4-Bromofluorobenzene (Surr)	98		72 - 124						
Dibromofluoromethane (Surr)	106		75 - 120						

Lab Sample ID: 500-210799-2 MSD

Matrix: Water

Analysis Batch: 637792

Client Sample ID: Dup

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,1-Dichloroethane	19		50.0	66.0		ug/L		94	70 - 125	6	20
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	116		75 - 126								
Toluene-d8 (Surr)	95		75 - 120								
4-Bromofluorobenzene (Surr)	102		72 - 124								
Dibromofluoromethane (Surr)	107		75 - 120								

Eurofins Chicago

Lab Chronicle

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

Client Sample ID: MW8

Date Collected: 01/11/22 10:00

Date Received: 01/12/22 10:15

Lab Sample ID: 500-210799-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	637792	01/14/22 14:49	PSP	TAL CHI

Client Sample ID: Dup

Date Collected: 01/11/22 10:05

Date Received: 01/12/22 10:15

Lab Sample ID: 500-210799-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	637792	01/14/22 15:16	PSP	TAL CHI

Client Sample ID: Trip Blank

Date Collected: 01/11/22 00:00

Date Received: 01/12/22 10:15

Lab Sample ID: 500-210799-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	637792	01/14/22 15:42	PSP	TAL CHI

Laboratory References:

TAL CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: Environmental Information Logistics (EIL)
Project/Site: Interstate Pollution Control Site

Job ID: 500-210799-1

Laboratory: Eurofins Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	IL00035	04-29-22

1

2

3

4

5

6

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9

10

11

12

13

14

15

TAL-8210

TAL-8210

1/24/2022

Login Sample Receipt Checklist

Client: Environmental Information Logistics (EIL)

Job Number: 500-210799-1

Login Number: 210799

List Source: Eurofins Chicago

List Number: 1

Creator: Buckley, Paula M

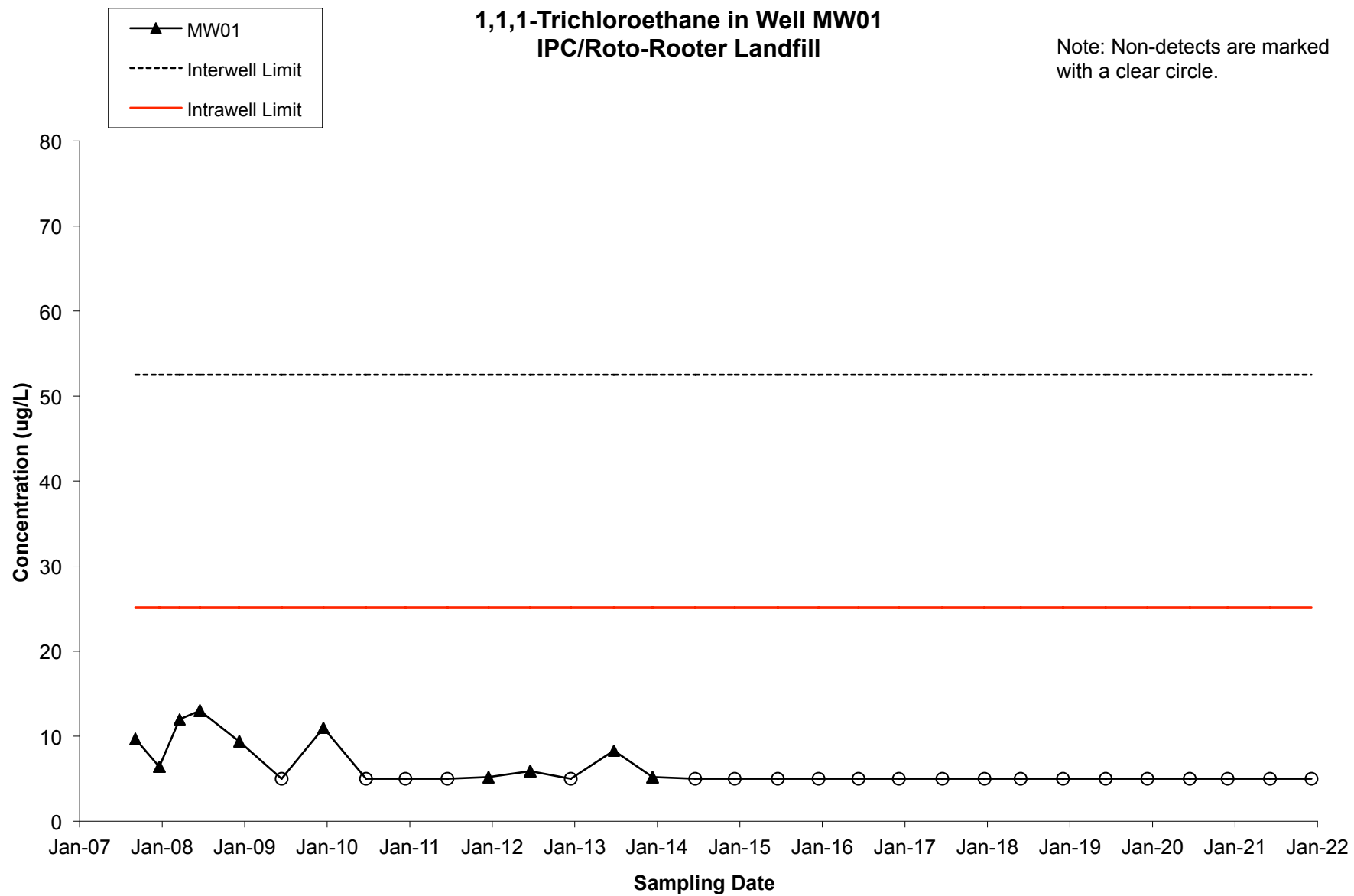
Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	-0.6 samples were not frozen
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Attachment 2

COC Concentration Time Trends

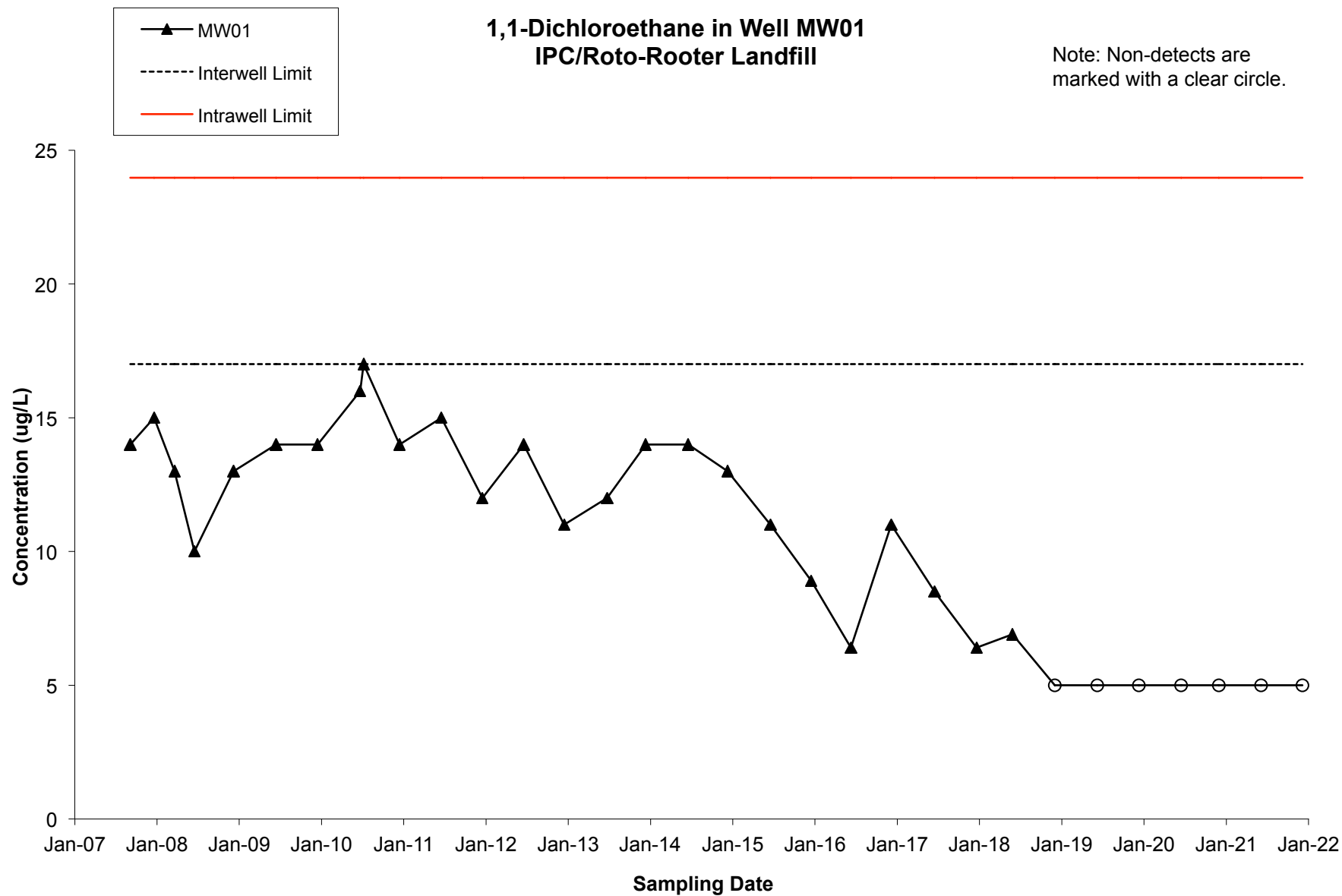
1,1,1-Trichloroethane in Well MW01 IPC/Roto-Rooter Landfill

Note: Non-detects are marked
with a clear circle.



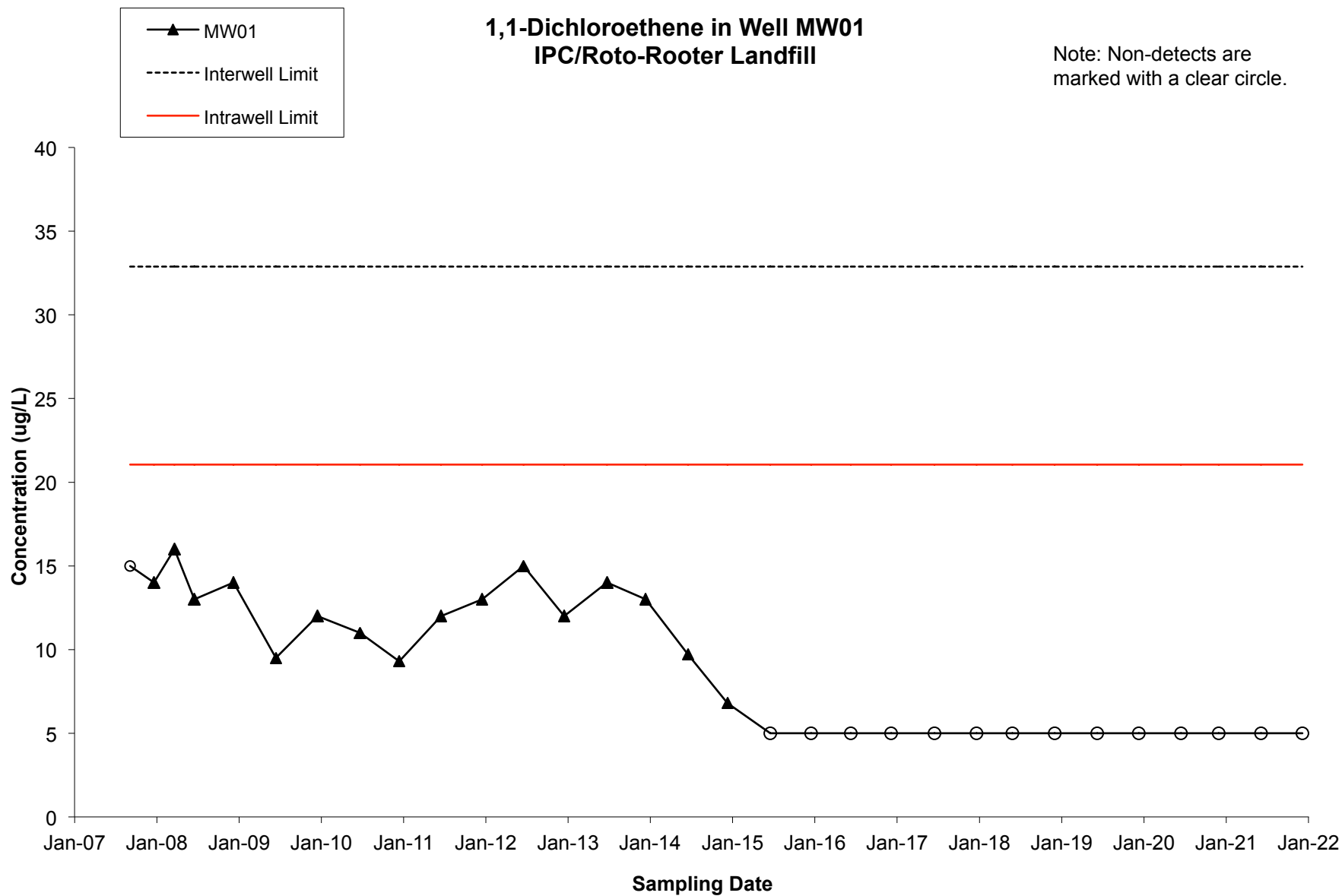
1,1-Dichloroethane in Well MW01 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



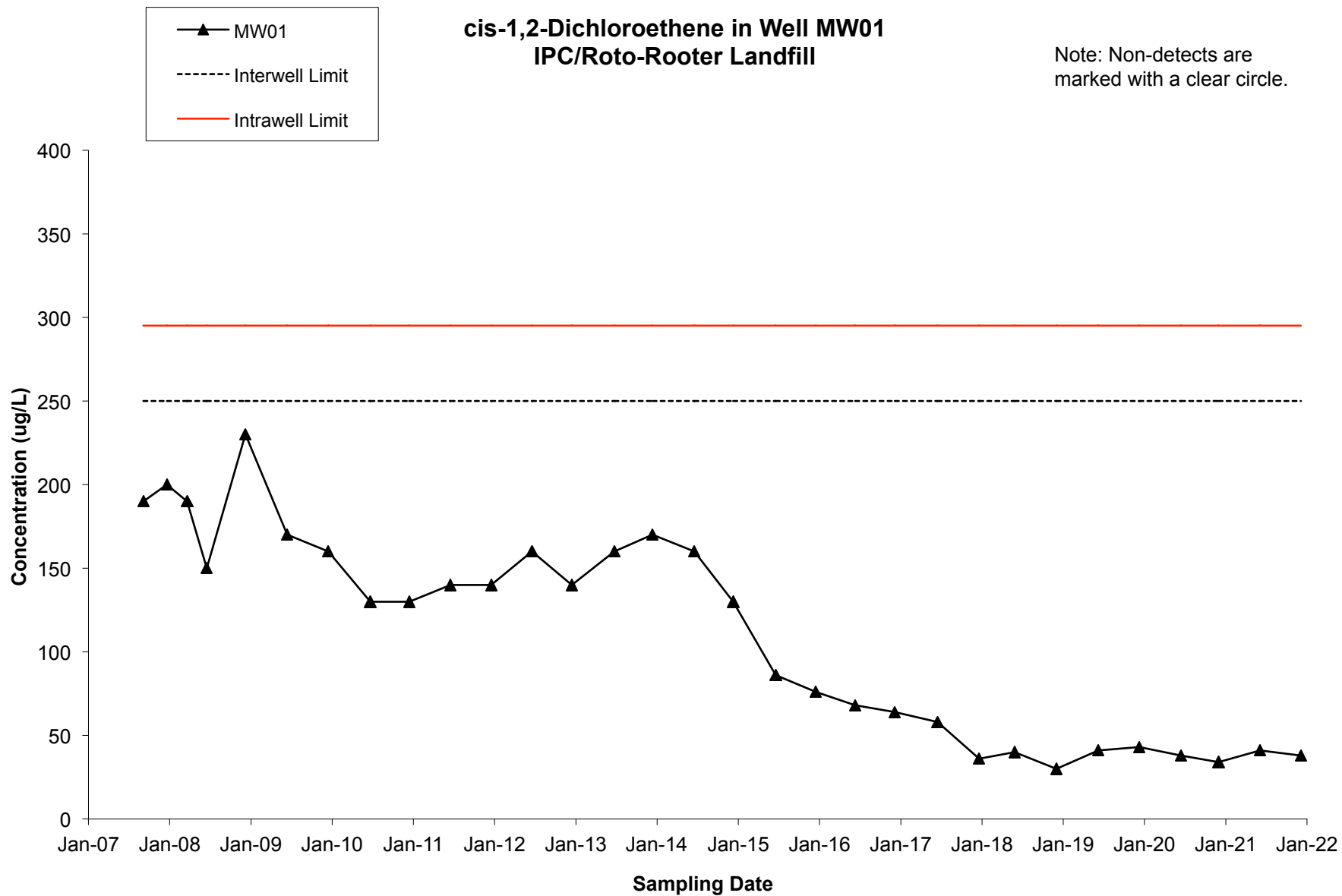
1,1-Dichloroethene in Well MW01 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.

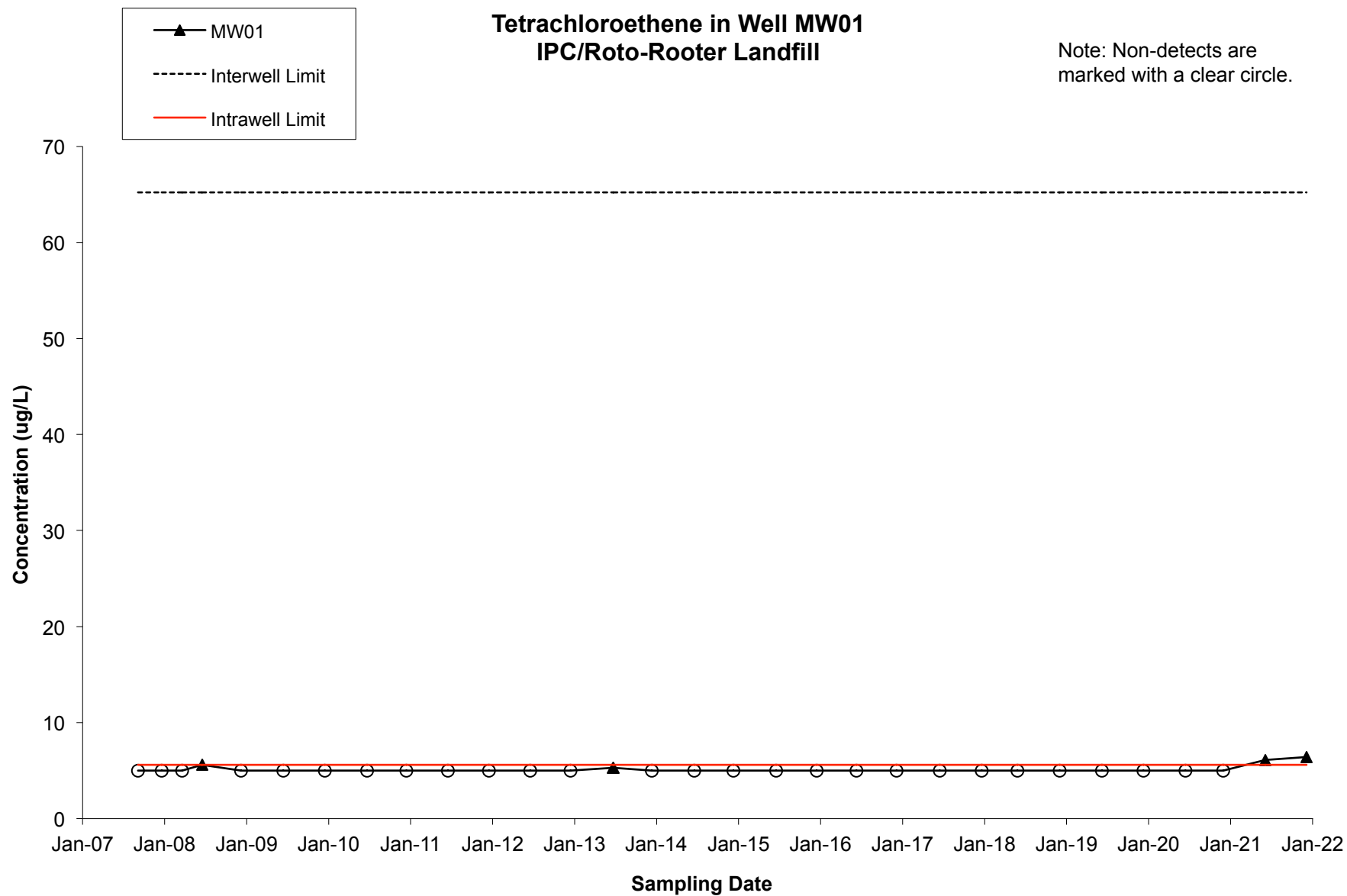


**cis-1,2-Dichloroethene in Well MW01
IPC/Roto-Rooter Landfill**

Note: Non-detects are
marked with a clear circle.

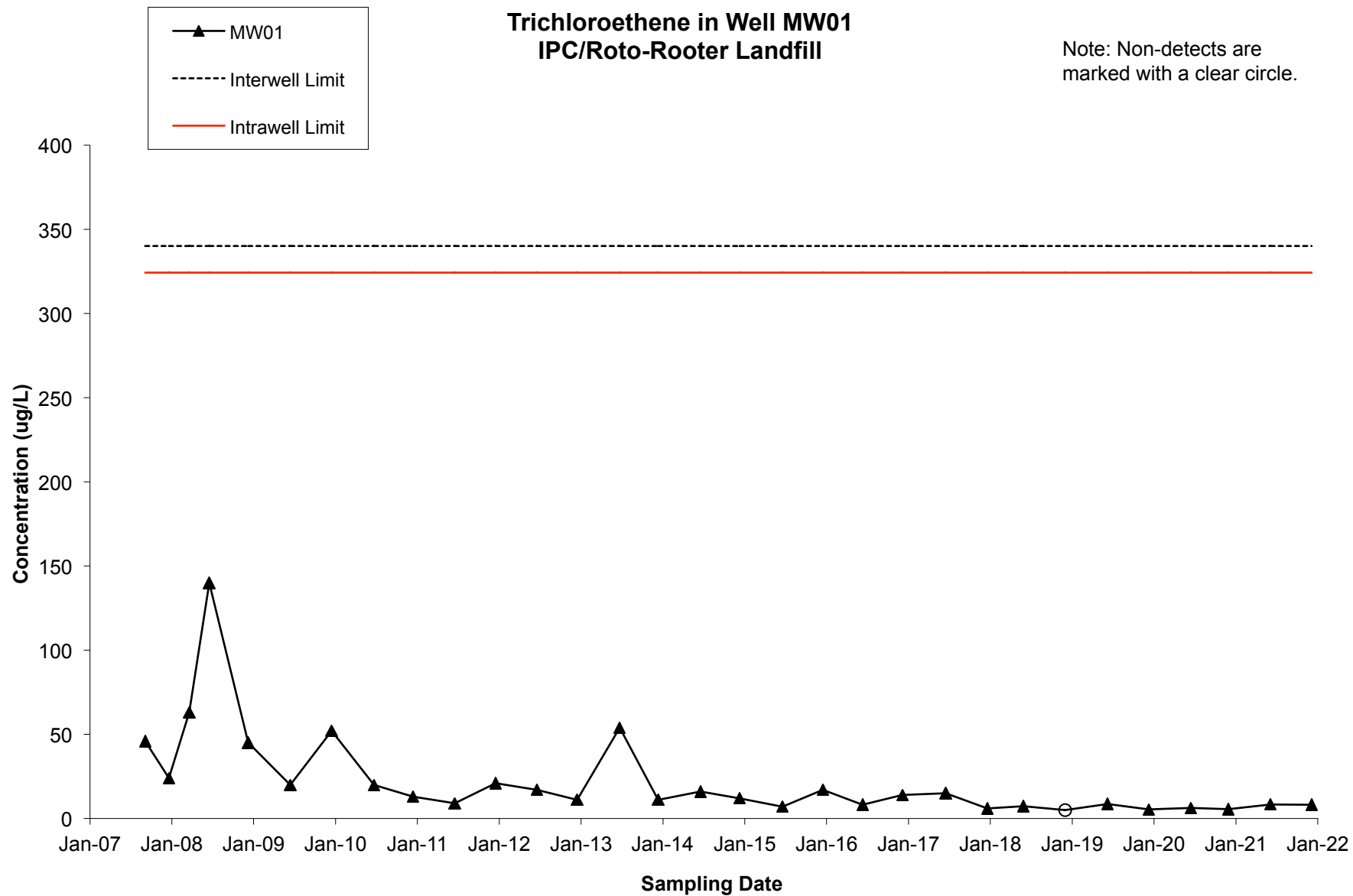


Note: Non-detects are marked with a clear circle.



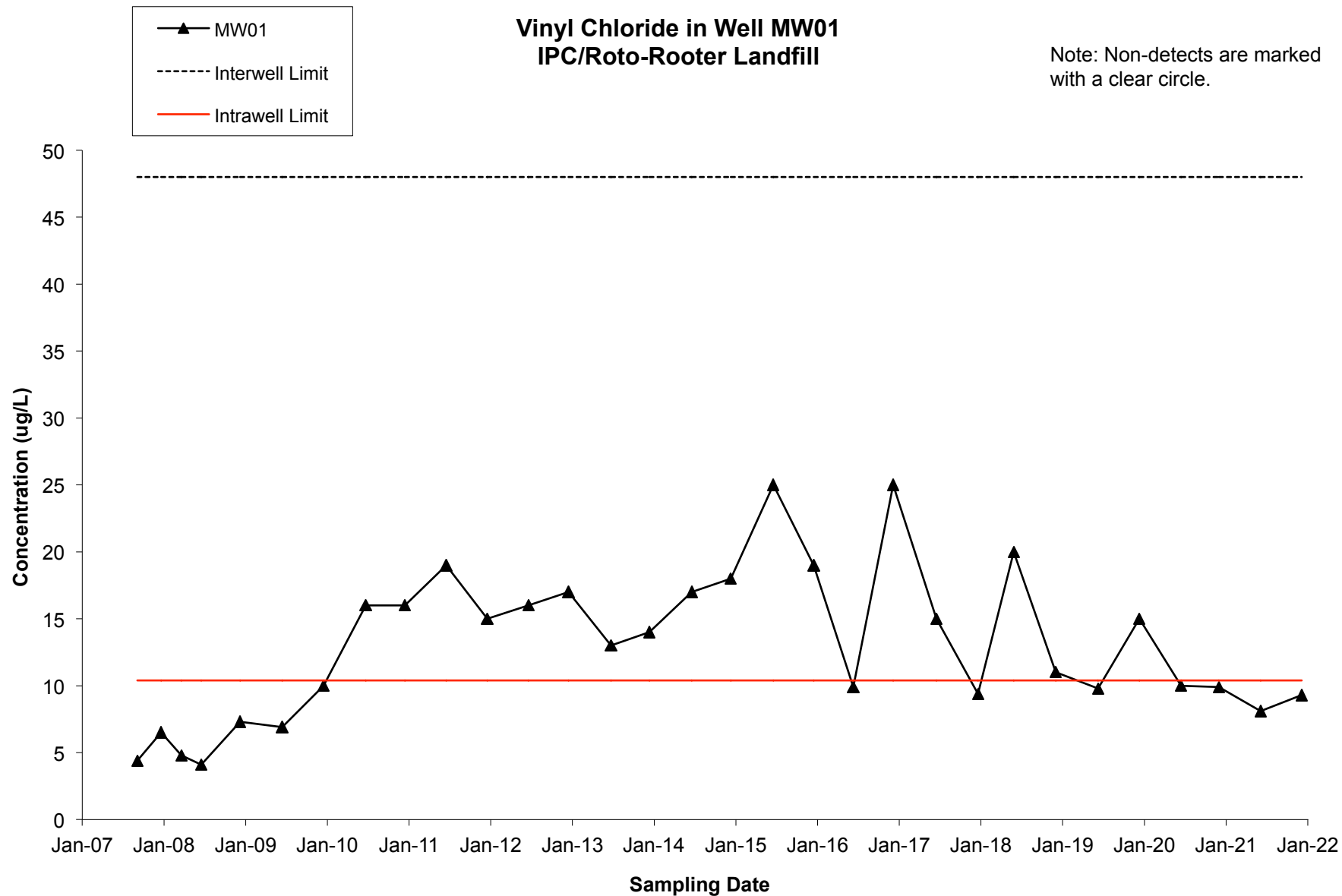
Trichloroethene in Well MW01 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



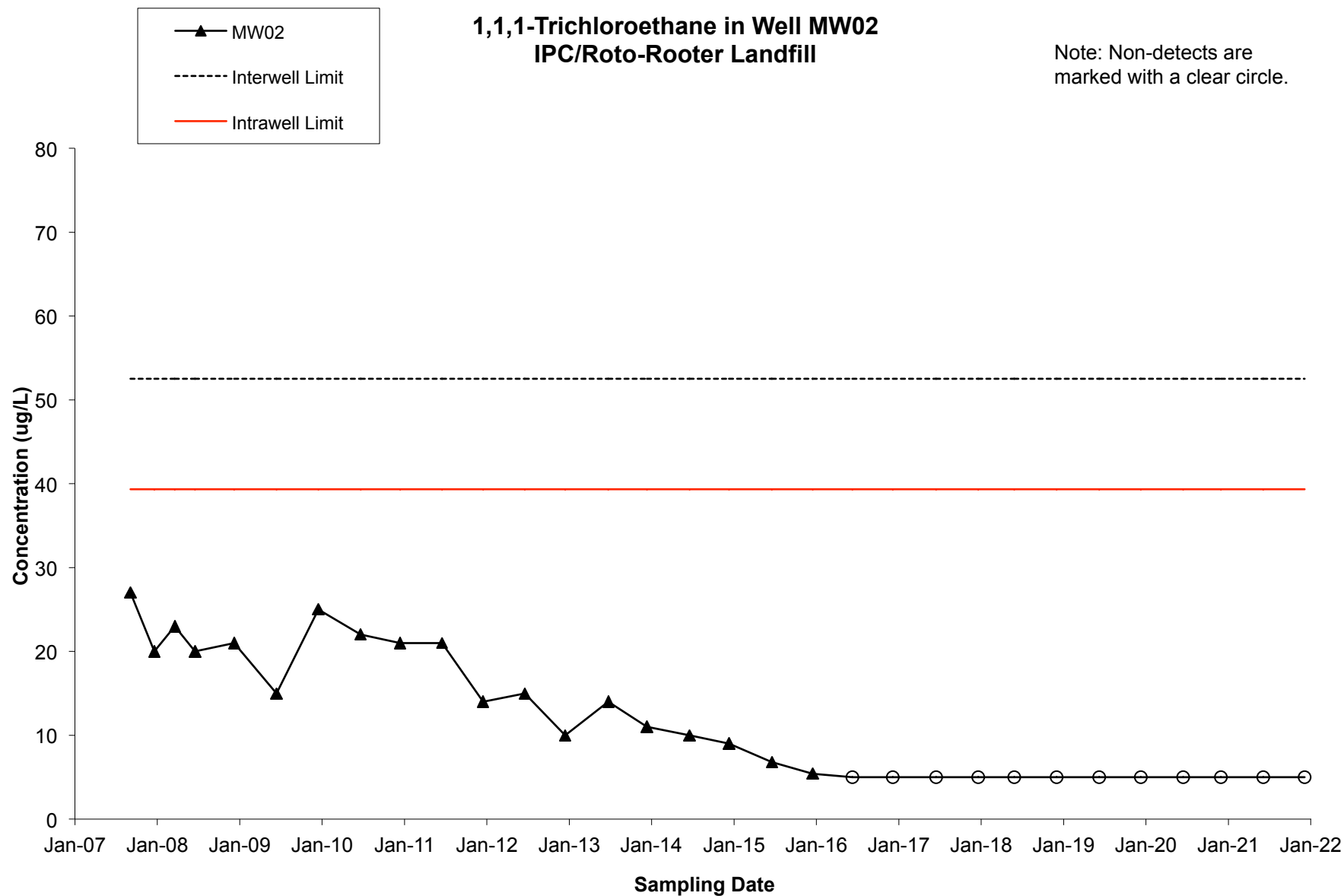
Vinyl Chloride in Well MW01 IPC/Roto-Rooter Landfill

Note: Non-detects are marked with a clear circle.



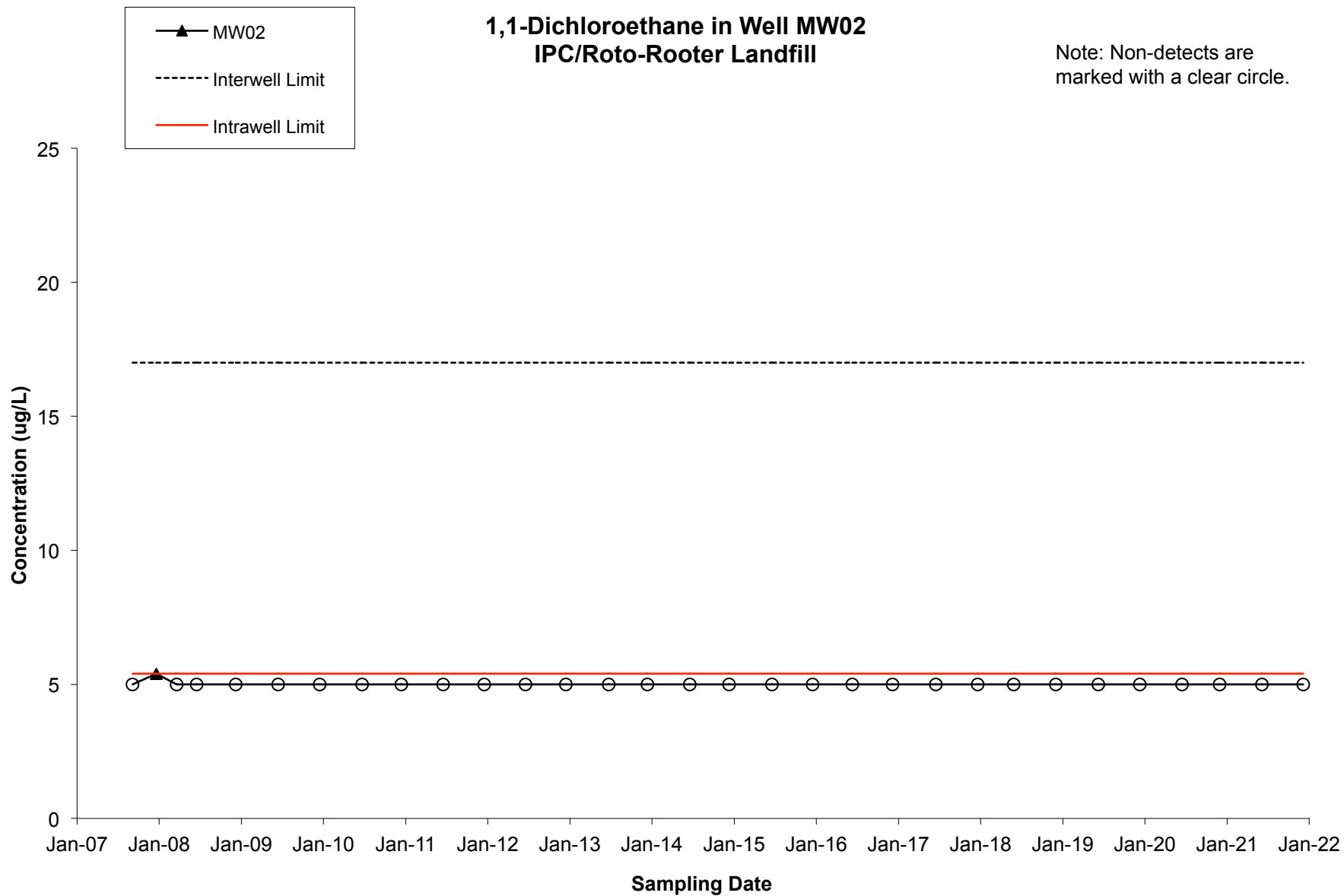
1,1,1-Trichloroethane in Well MW02 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



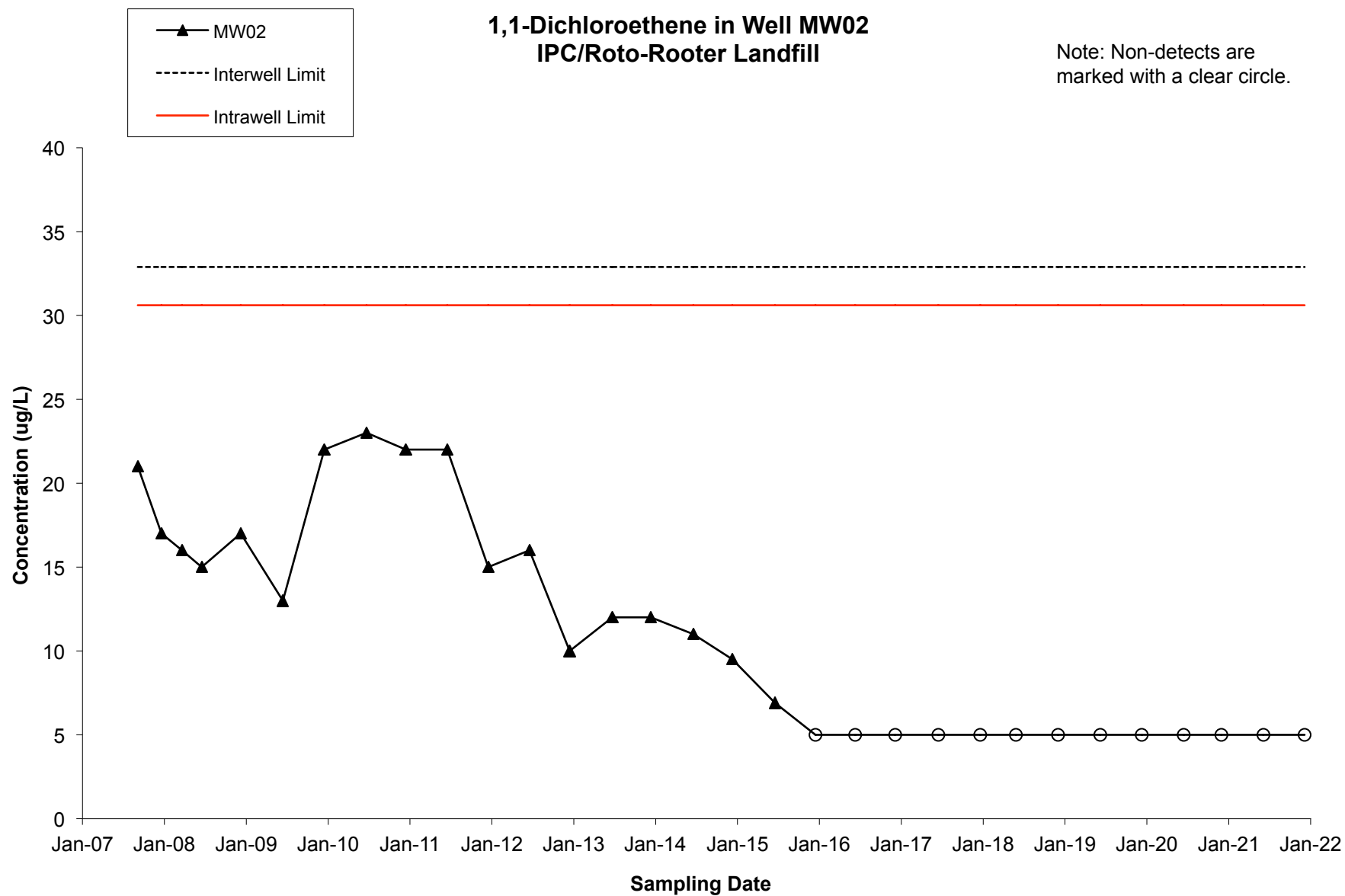
1,1-Dichloroethane in Well MW02 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



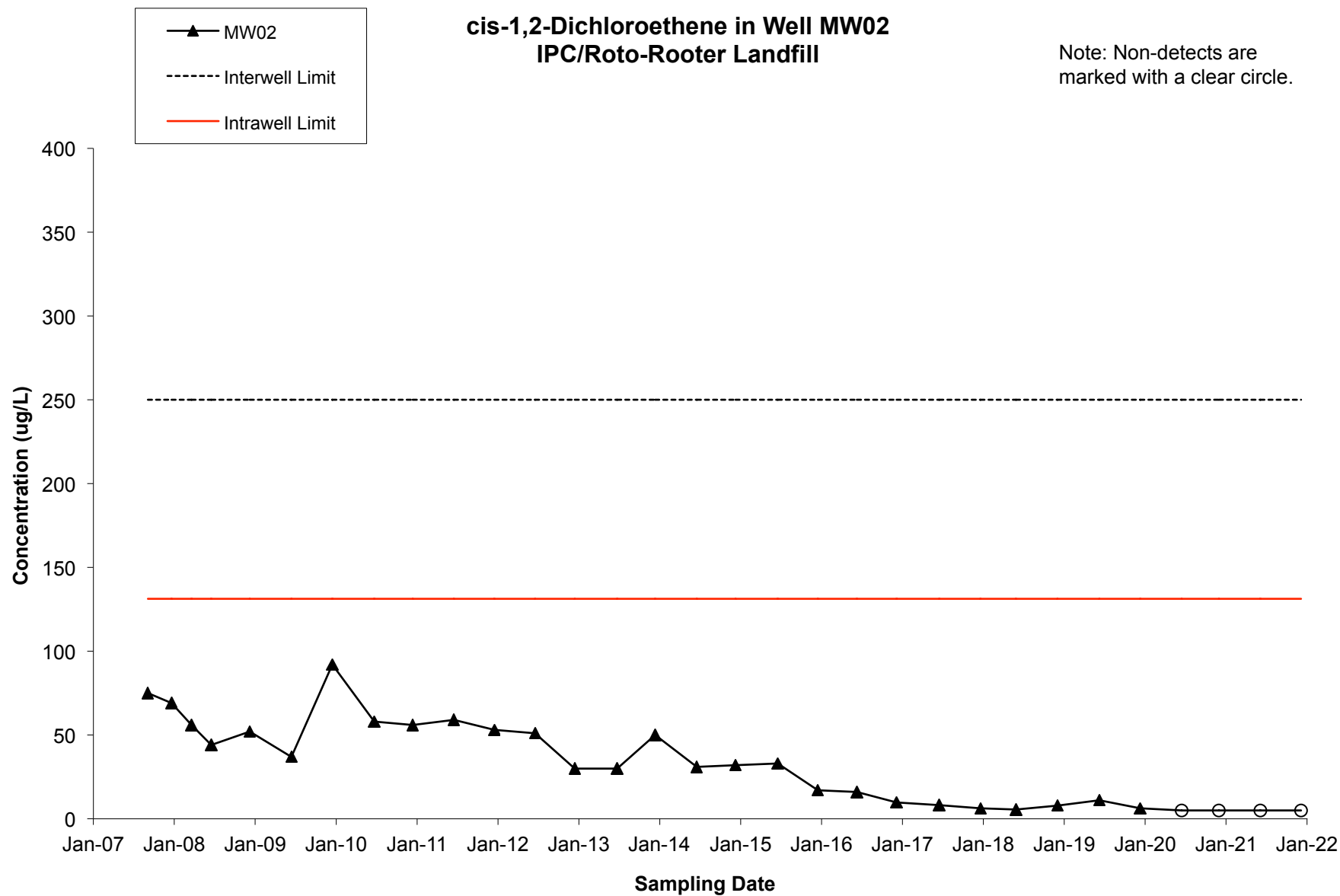
1,1-Dichloroethene in Well MW02 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



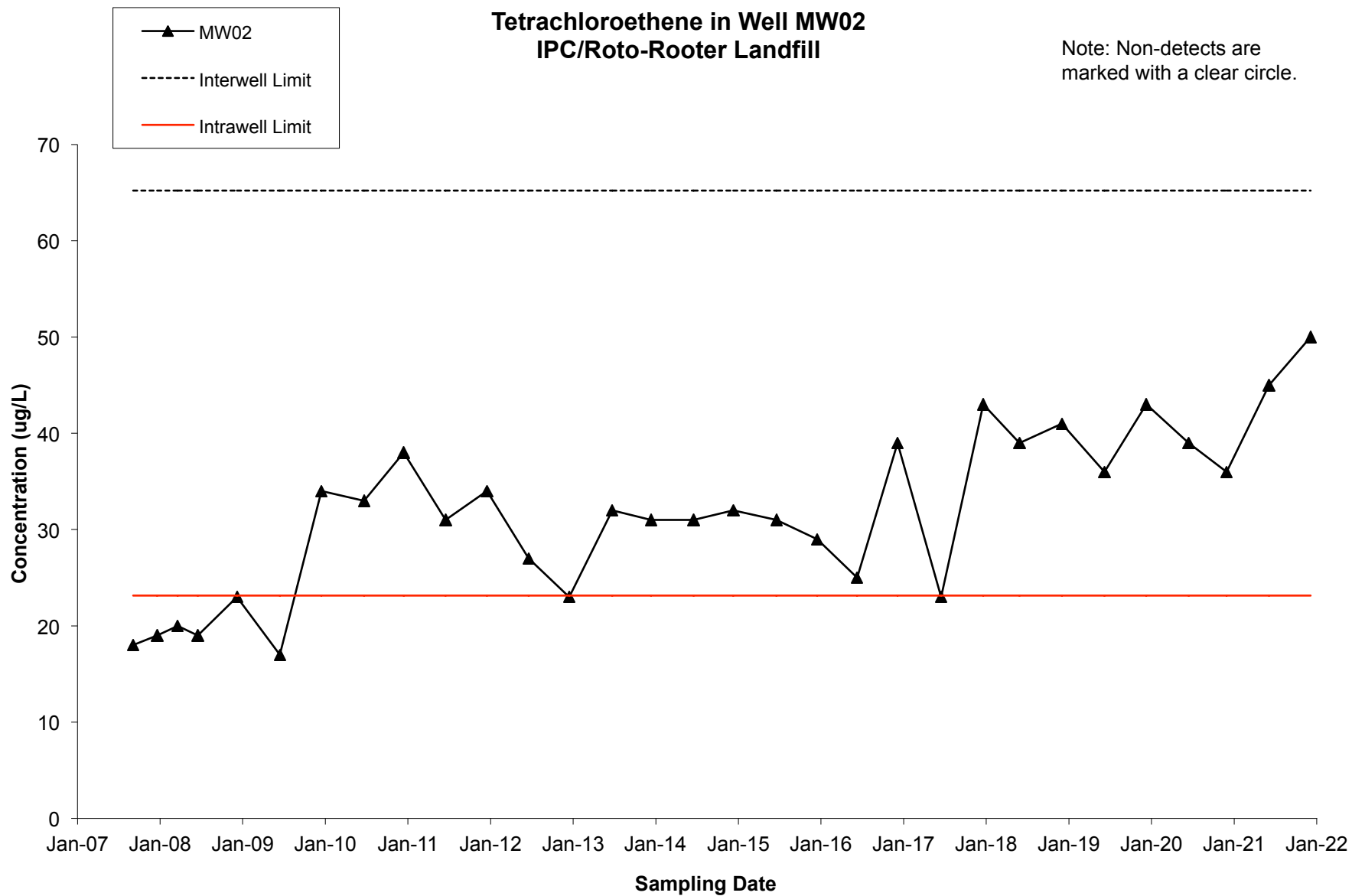
**cis-1,2-Dichloroethene in Well MW02
IPC/Roto-Rooter Landfill**

Note: Non-detects are
marked with a clear circle.



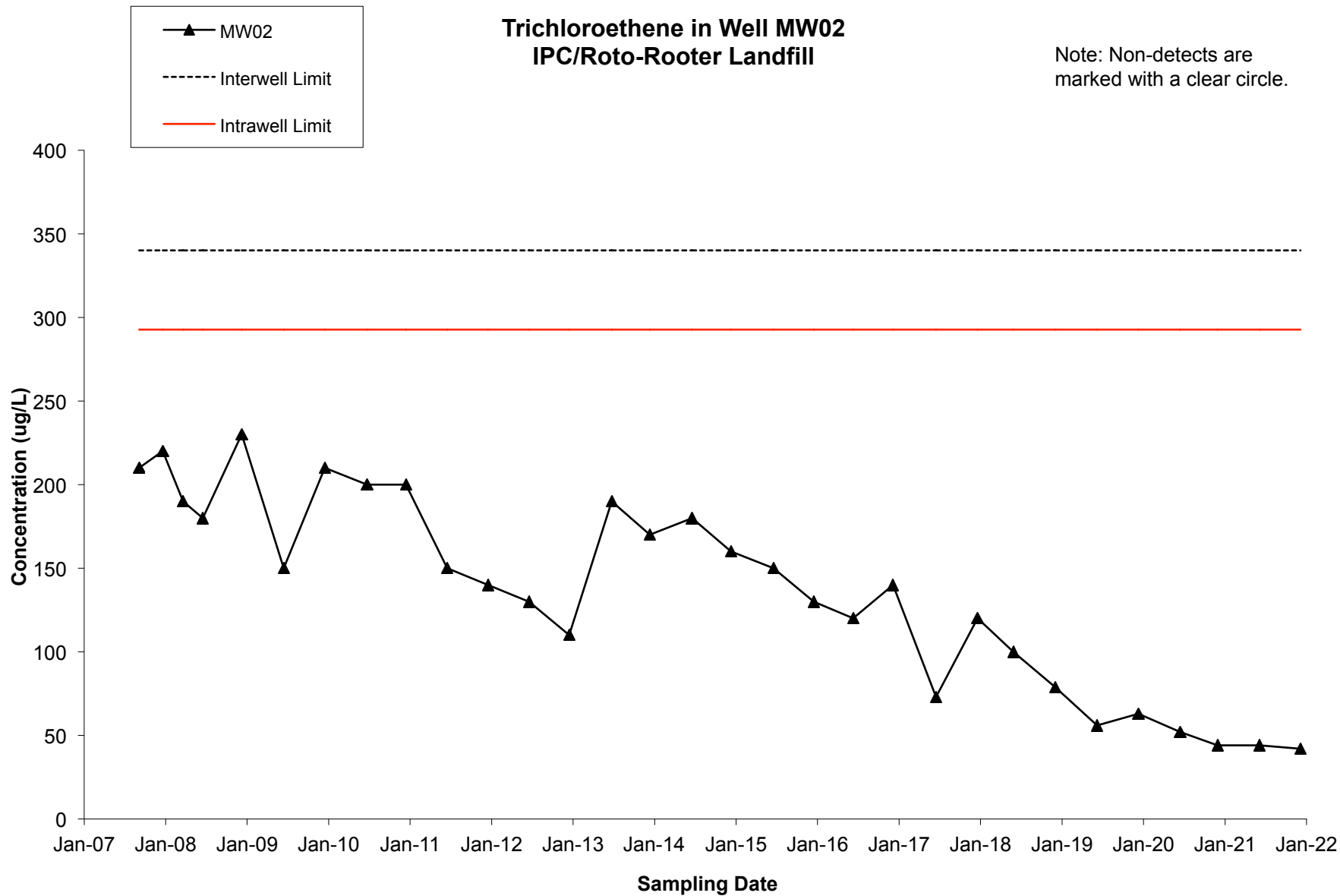
Tetrachloroethene in Well MW02 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



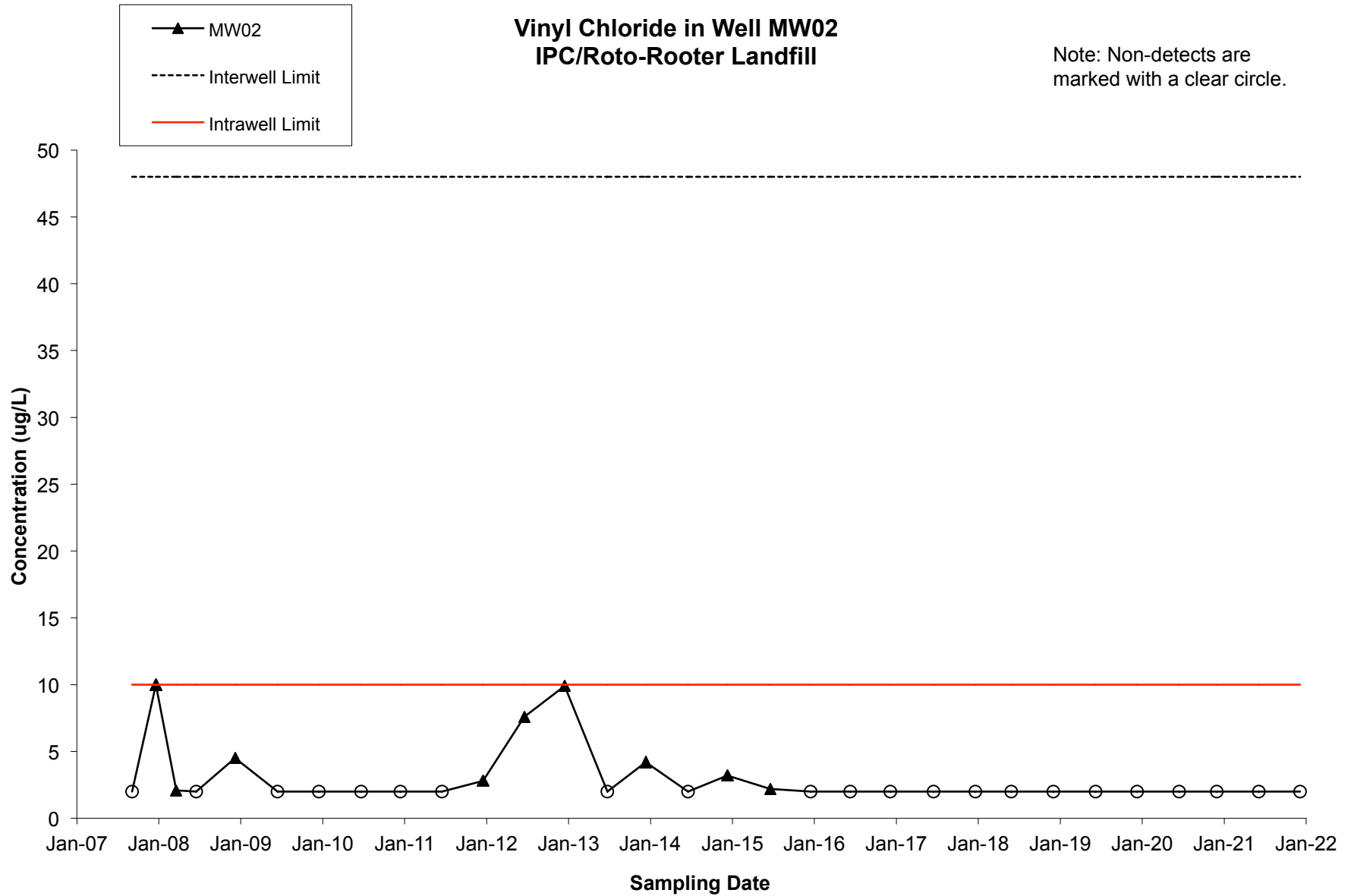
Trichloroethene in Well MW02 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



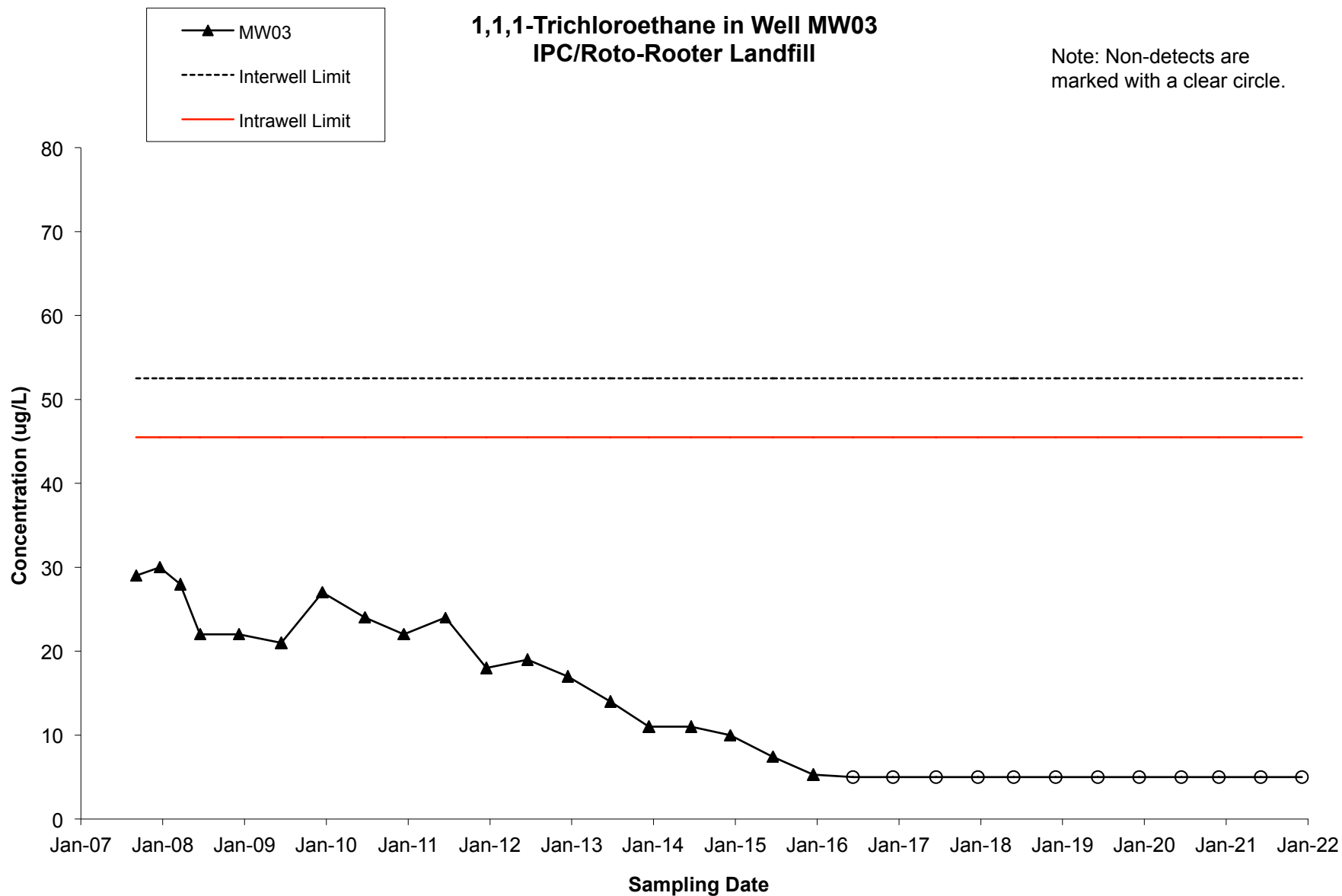
Vinyl Chloride in Well MW02 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



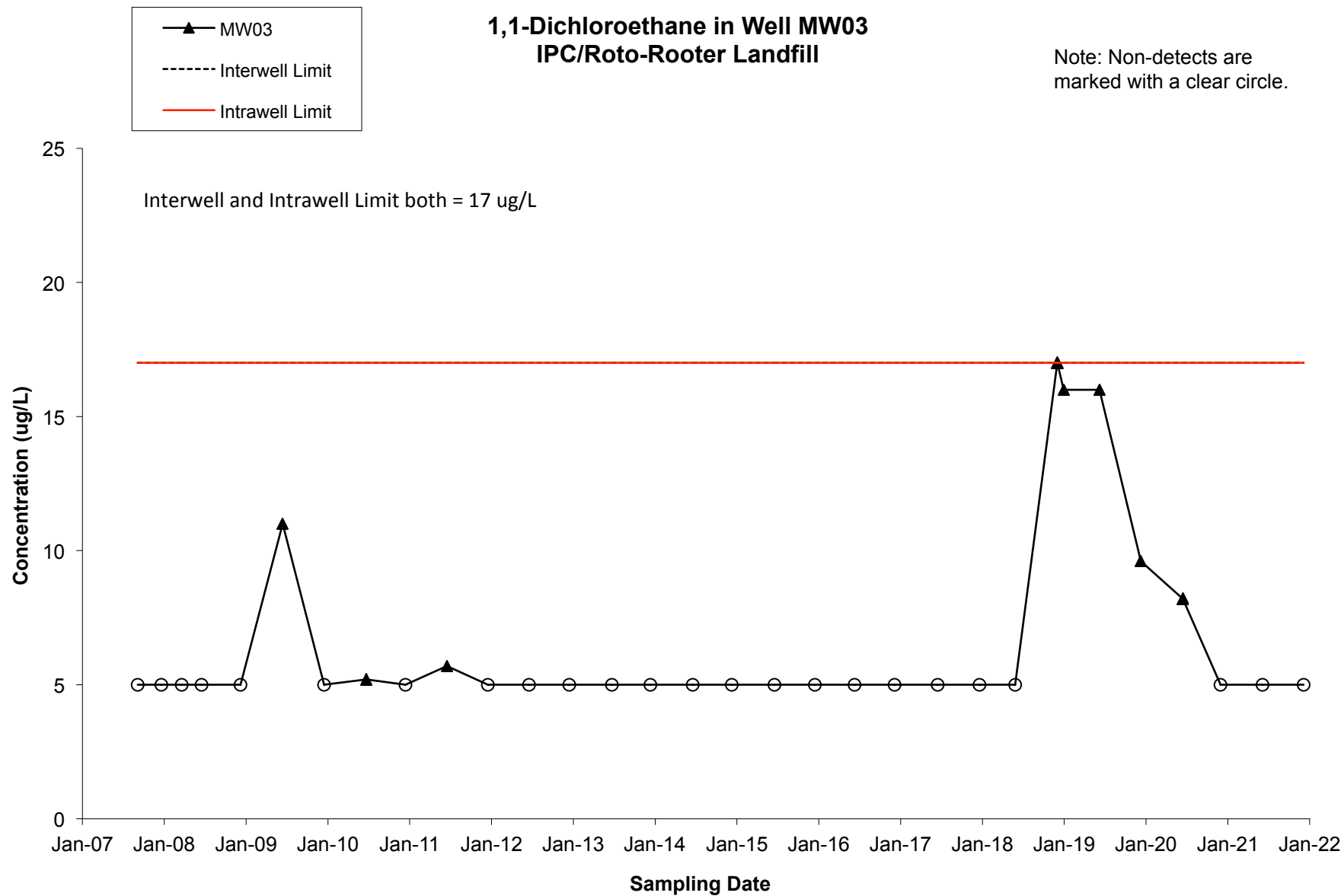
1,1,1-Trichloroethane in Well MW03 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



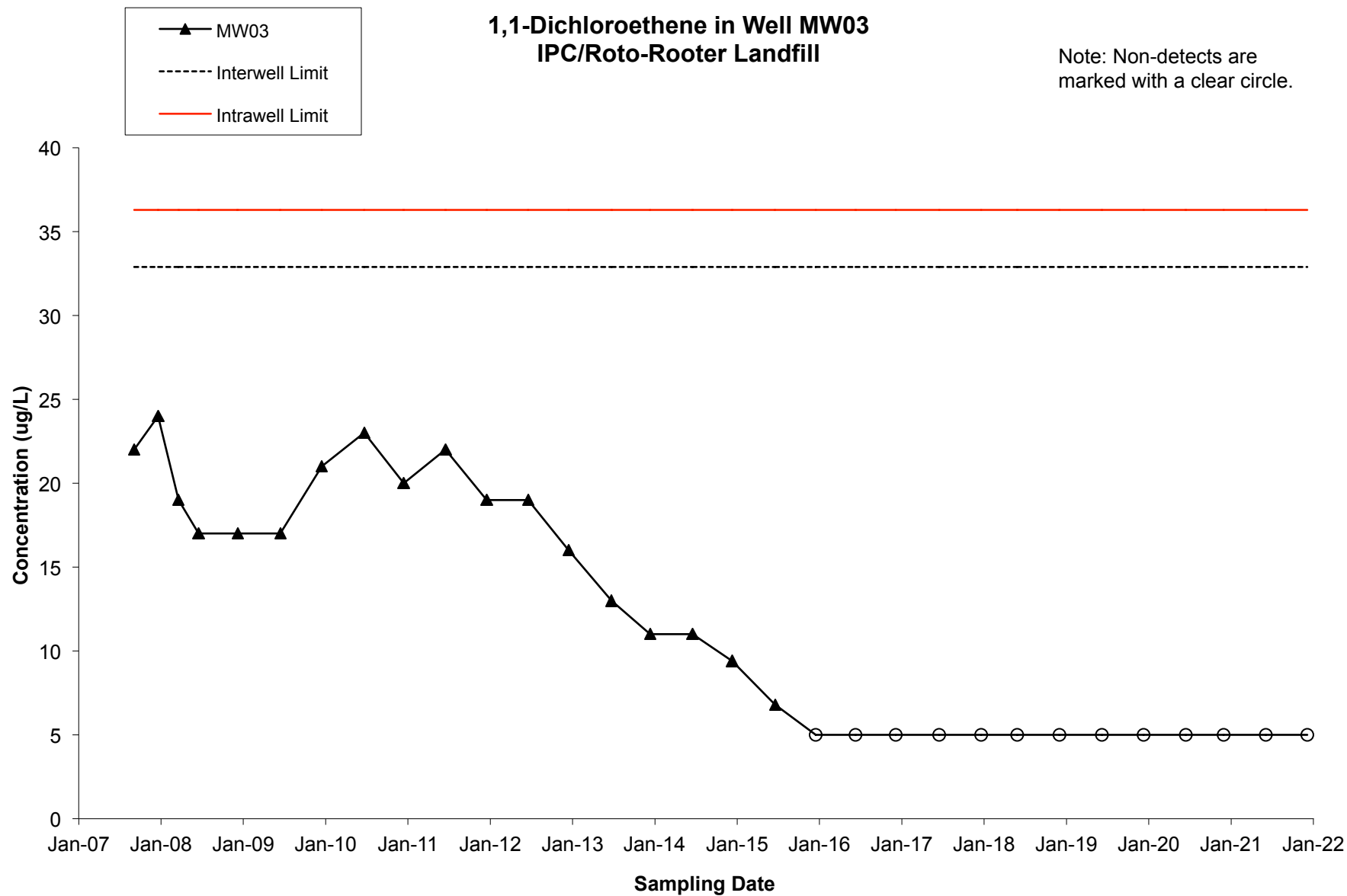
1,1-Dichloroethane in Well MW03 IPC/Roto-Rooter Landfill

Note: Non-detects are marked with a clear circle.



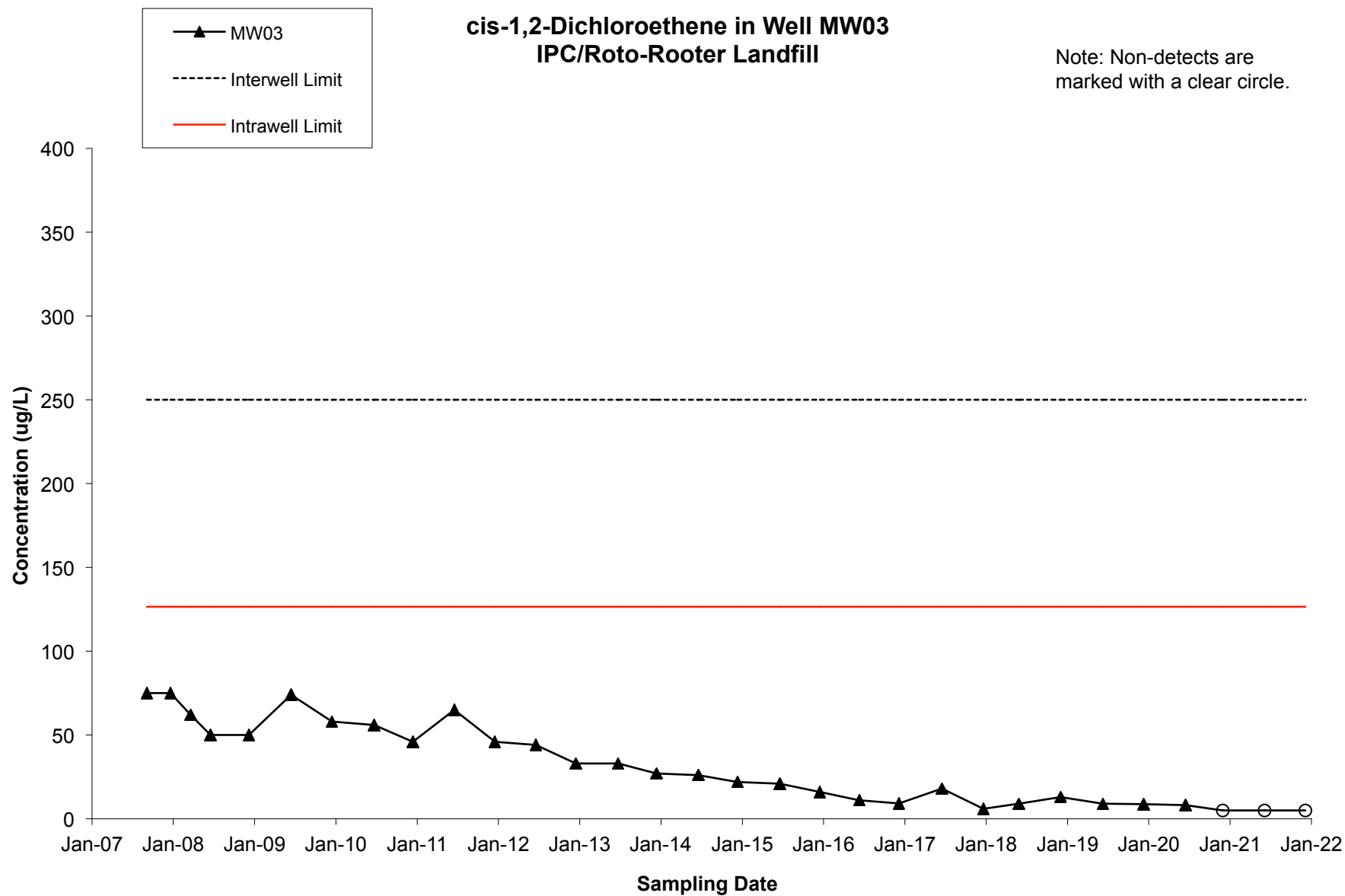
1,1-Dichloroethene in Well MW03 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



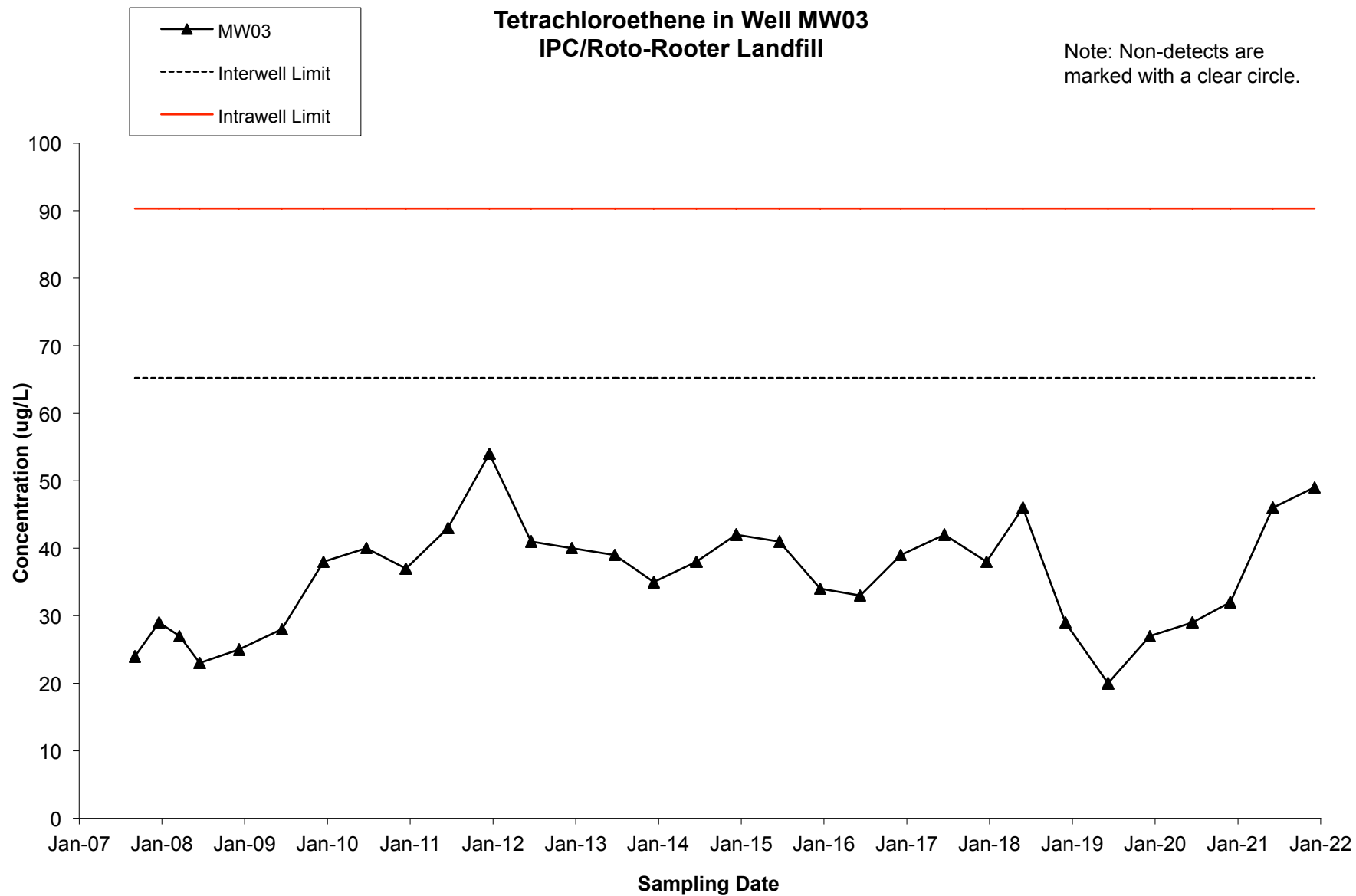
**cis-1,2-Dichloroethene in Well MW03
IPC/Roto-Rooter Landfill**

Note: Non-detects are
marked with a clear circle.



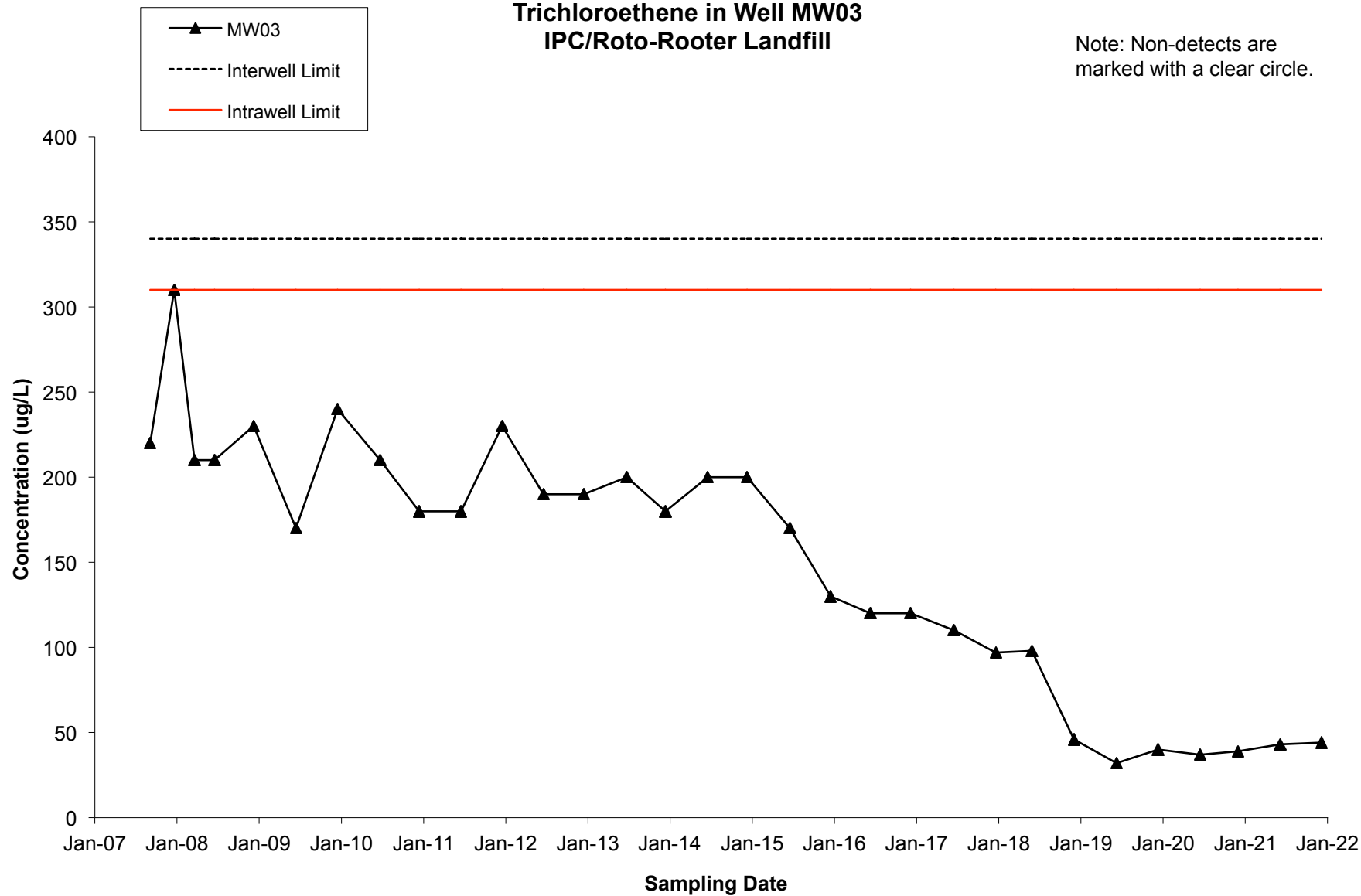
Tetrachloroethene in Well MW03 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



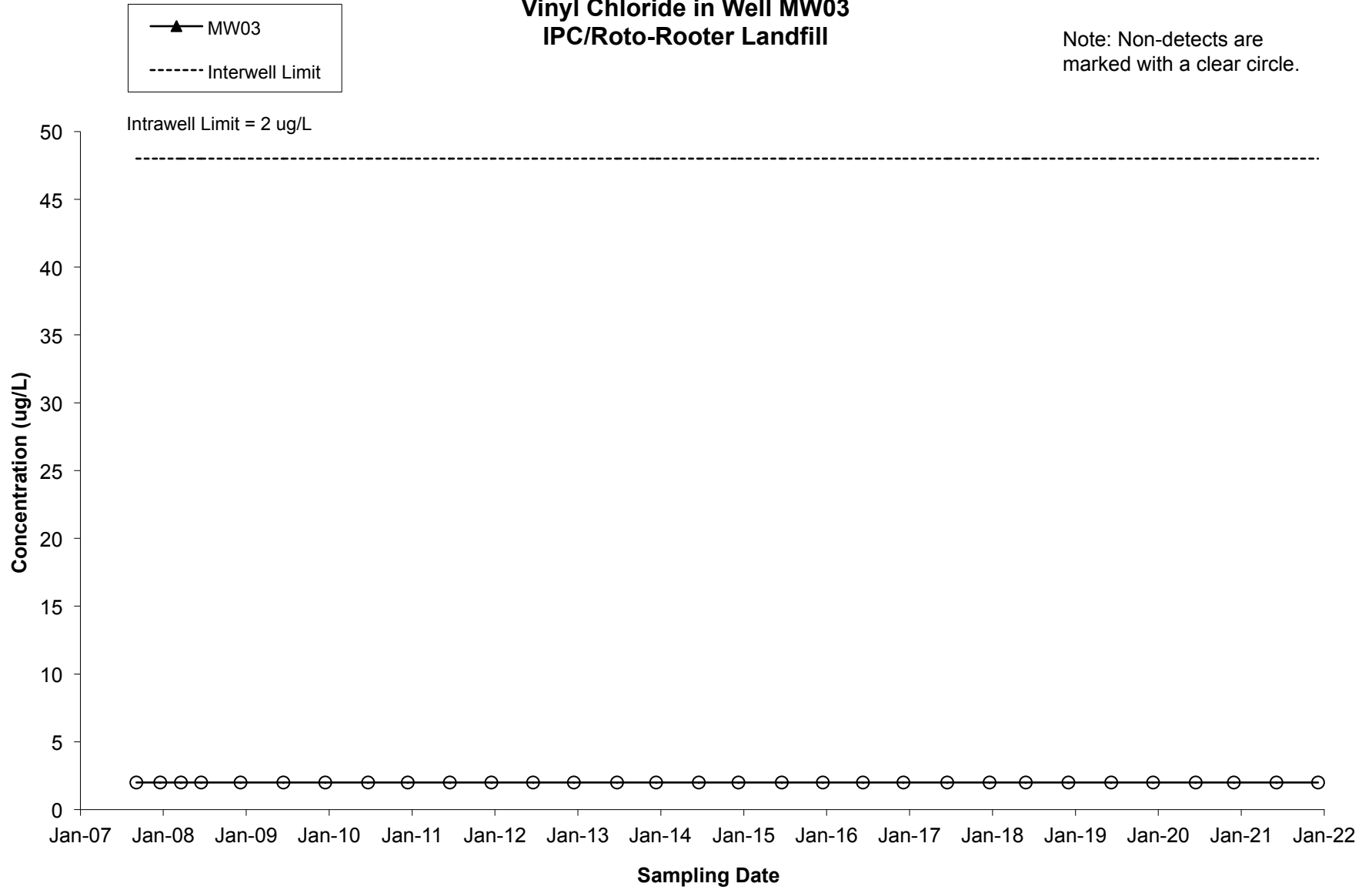
Trichloroethene in Well MW03 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



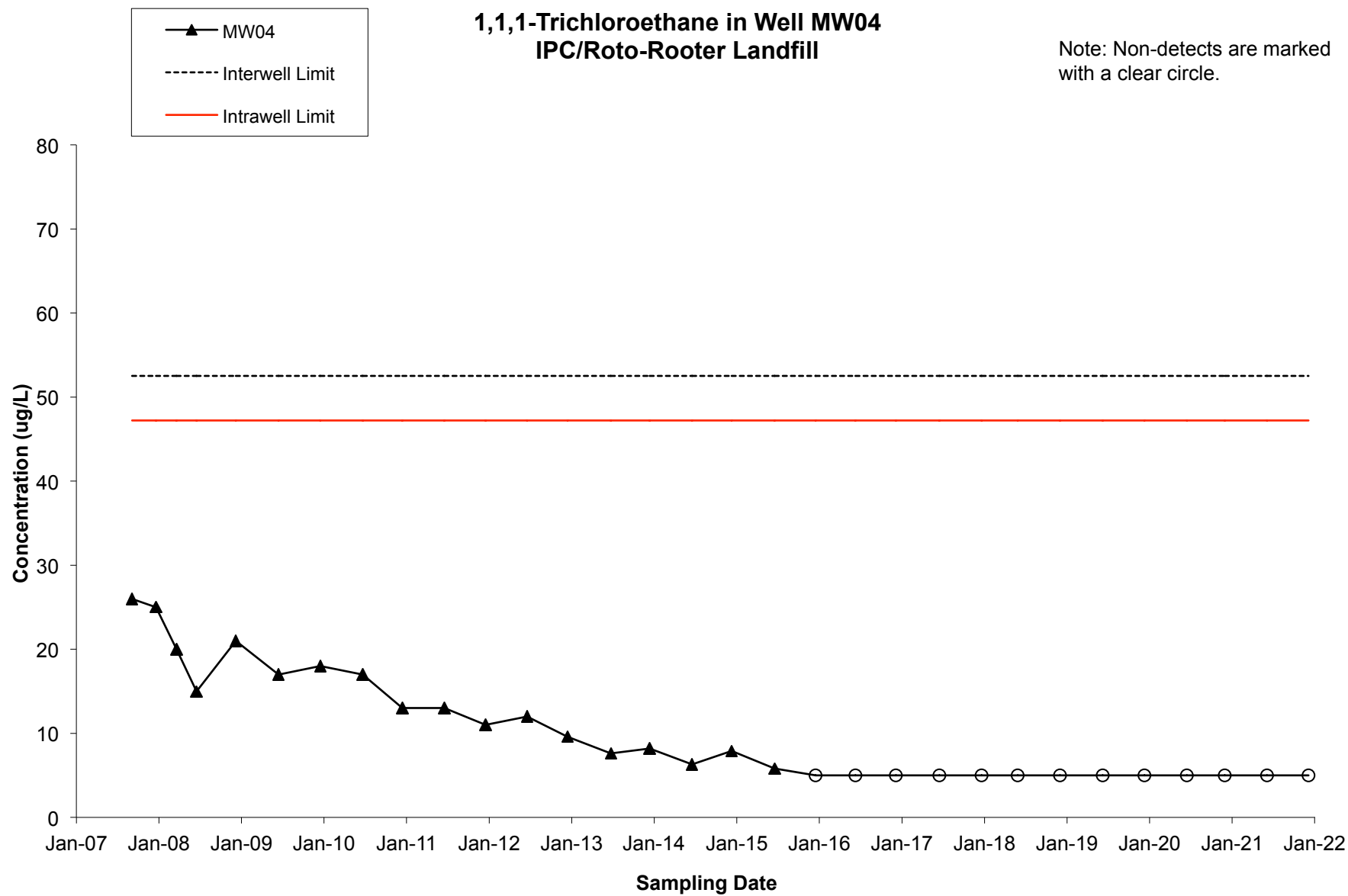
Vinyl Chloride in Well MW03 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



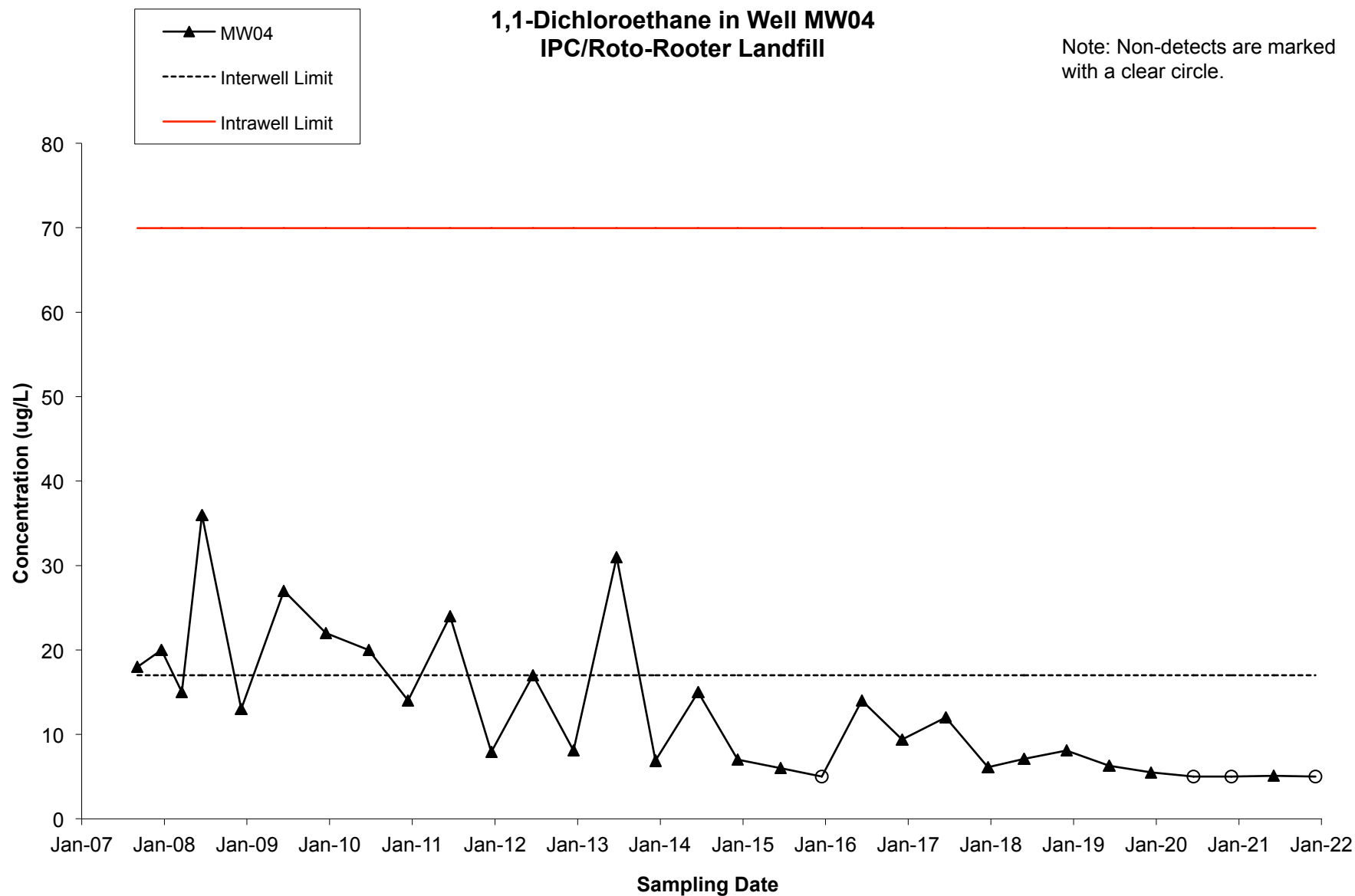
1,1,1-Trichloroethane in Well MW04 IPC/Roto-Rooter Landfill

Note: Non-detects are marked
with a clear circle.



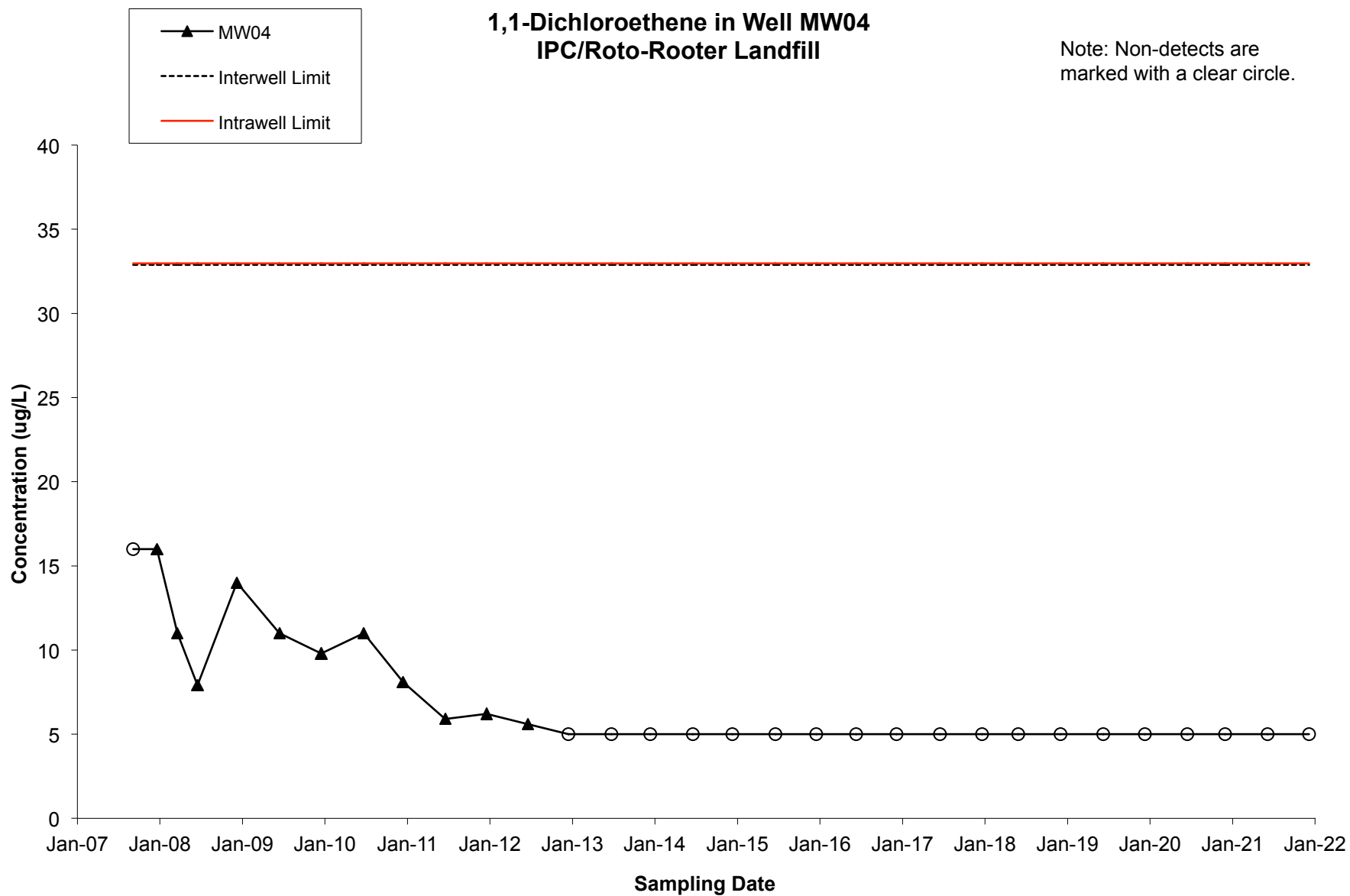
1,1-Dichloroethane in Well MW04 IPC/Roto-Rooter Landfill

Note: Non-detects are marked
with a clear circle.



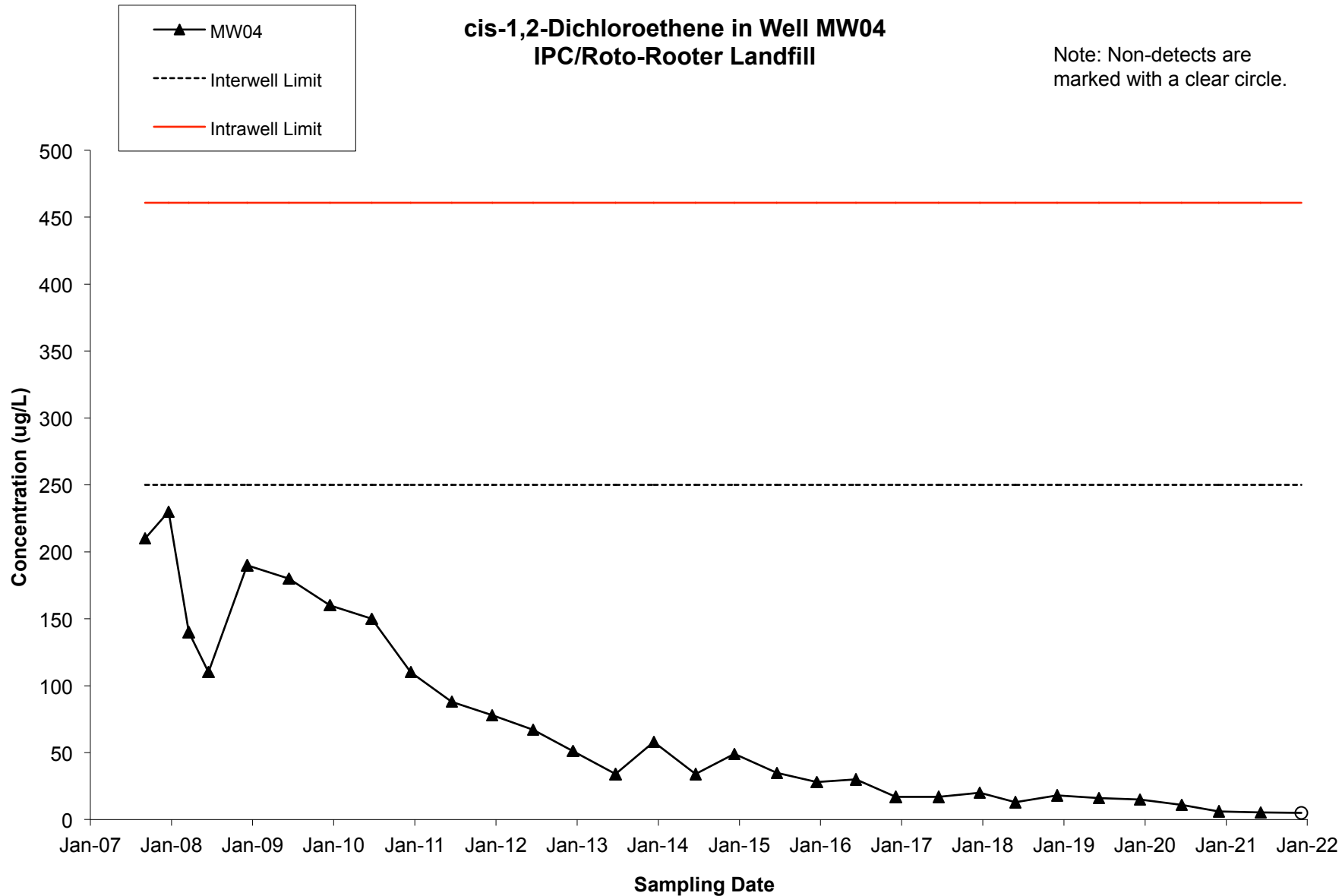
1,1-Dichloroethene in Well MW04 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



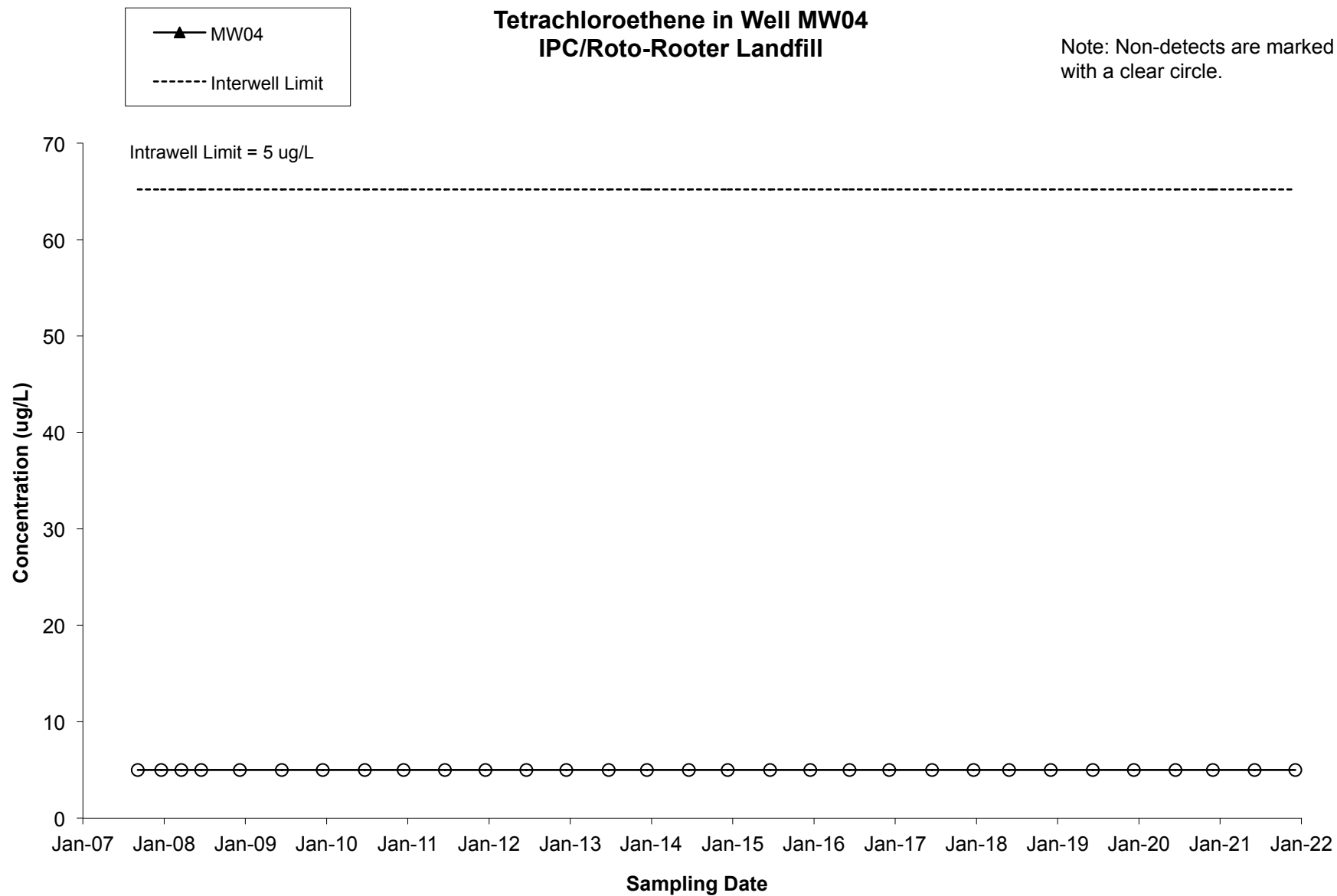
**cis-1,2-Dichloroethene in Well MW04
IPC/Roto-Rooter Landfill**

Note: Non-detects are
marked with a clear circle.



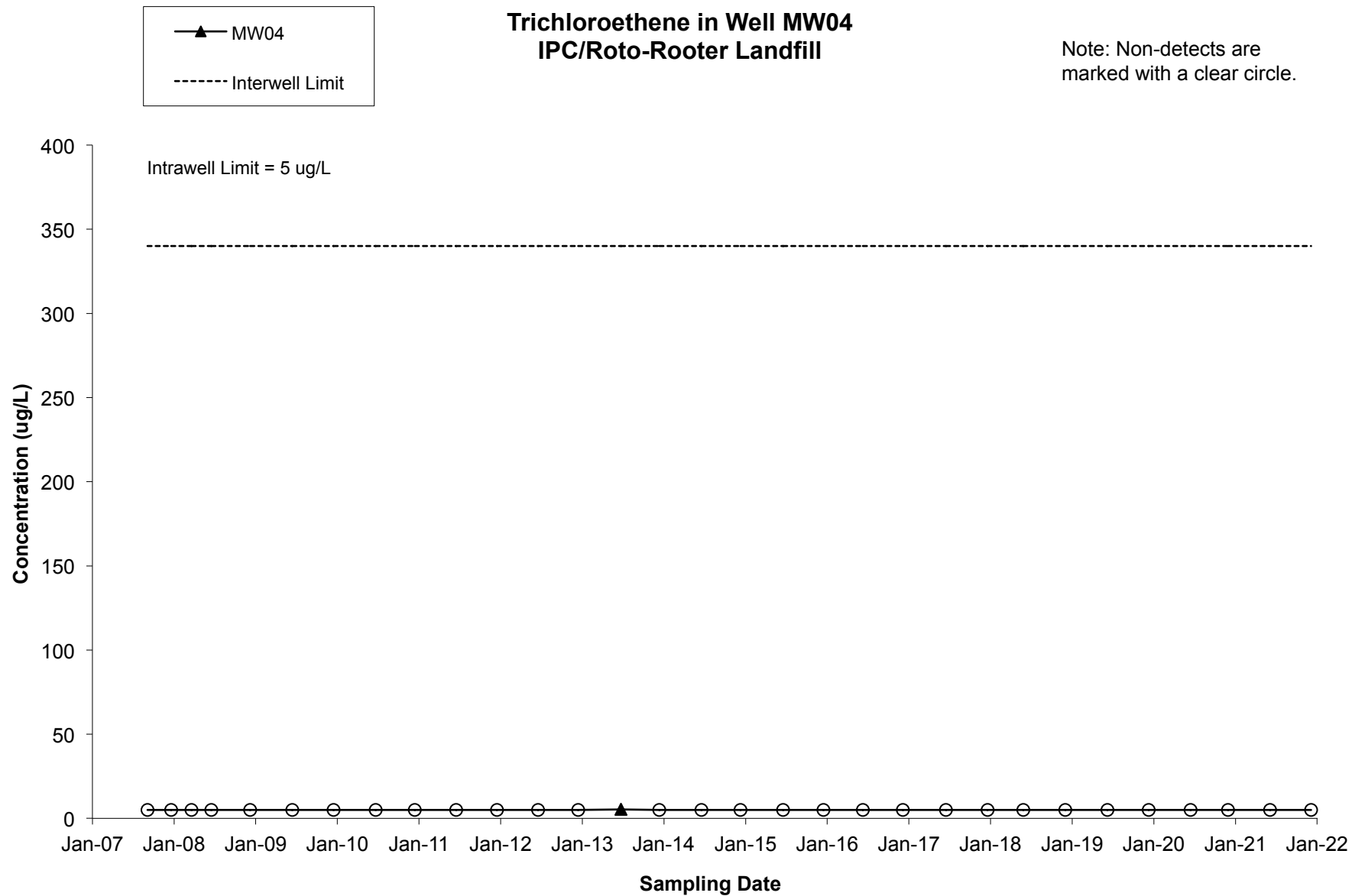
Tetrachloroethene in Well MW04 IPC/Roto-Rooter Landfill

Note: Non-detects are marked
with a clear circle.



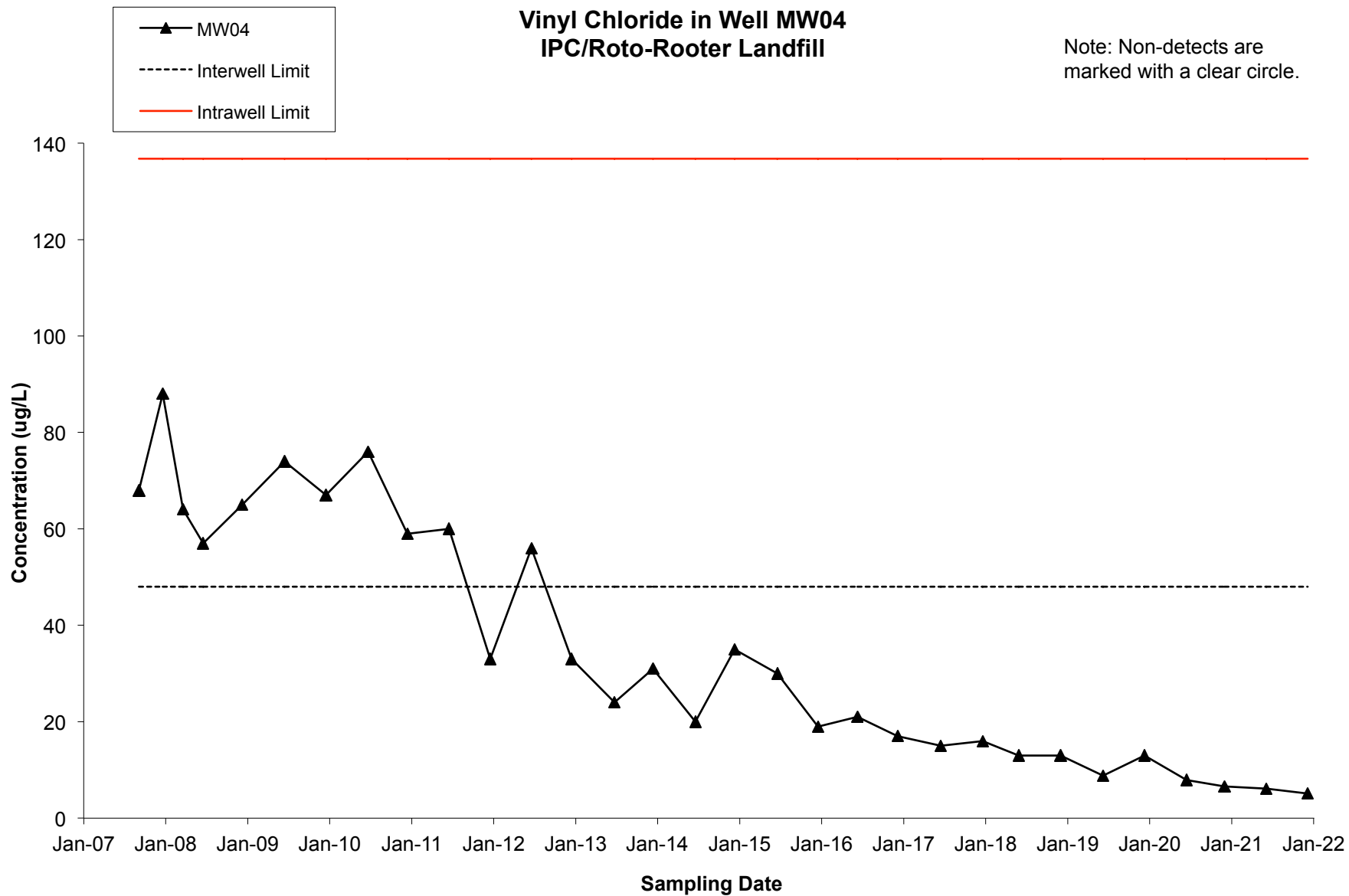
Trichloroethene in Well MW04 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



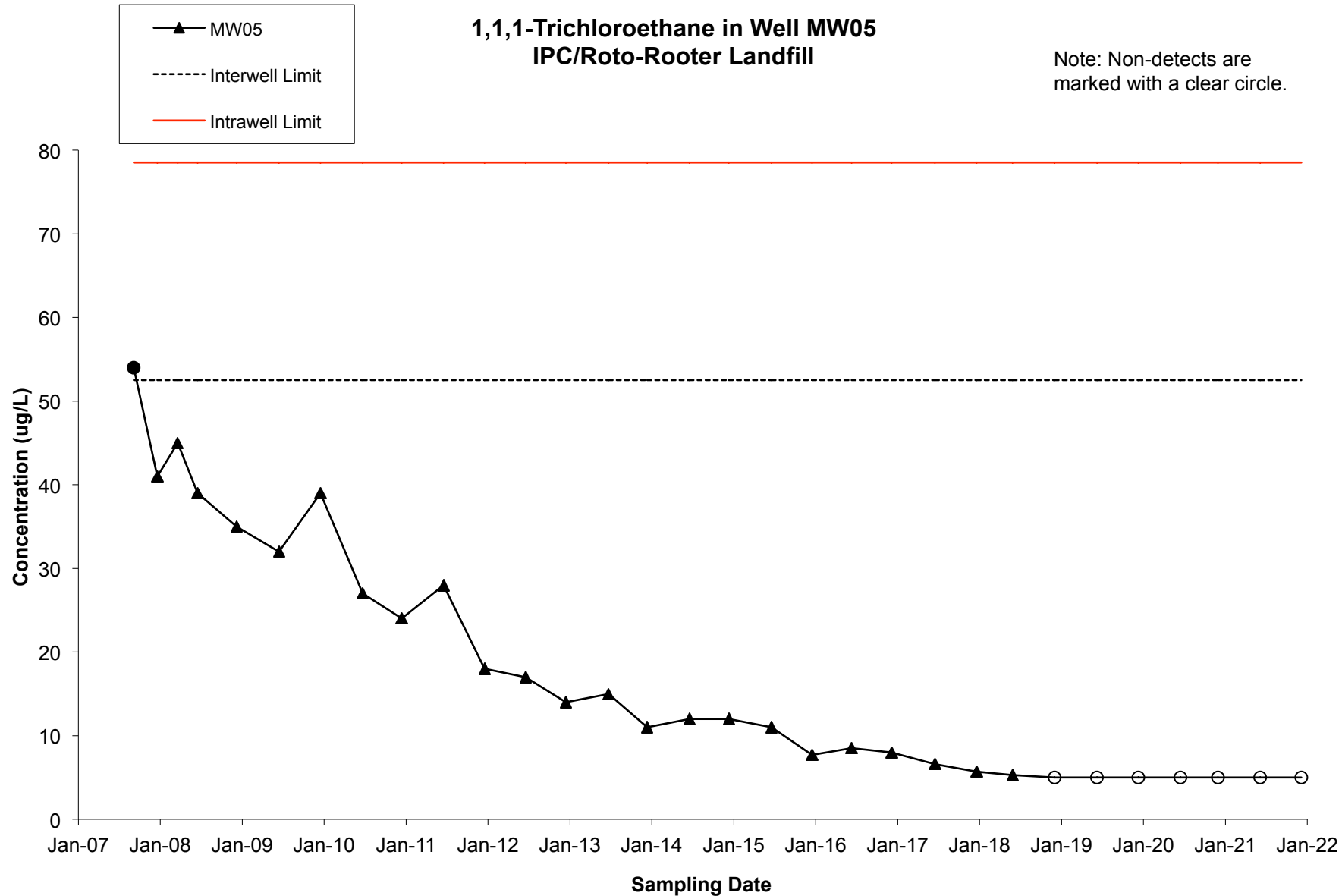
Vinyl Chloride in Well MW04 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



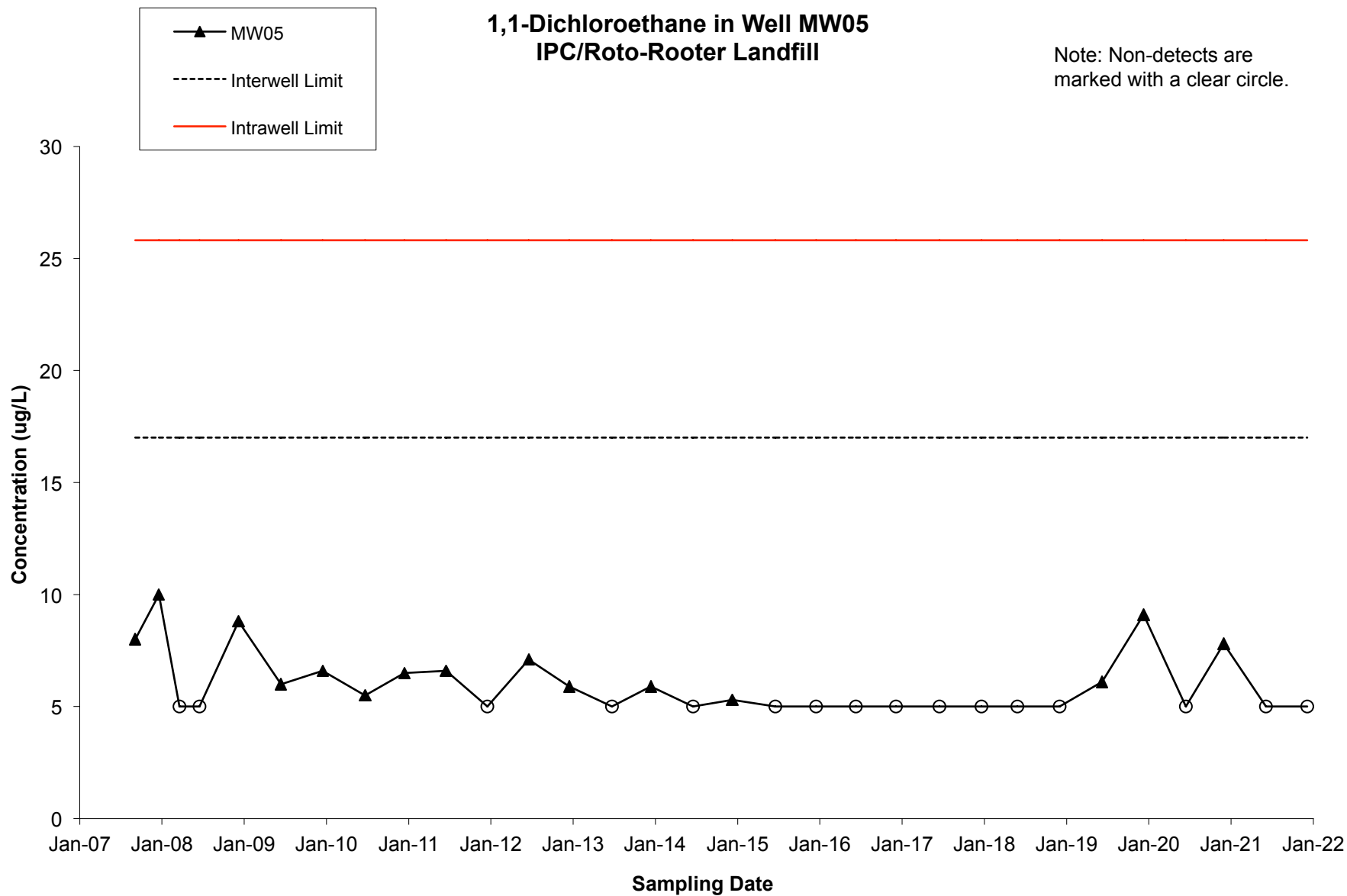
1,1,1-Trichloroethane in Well MW05 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



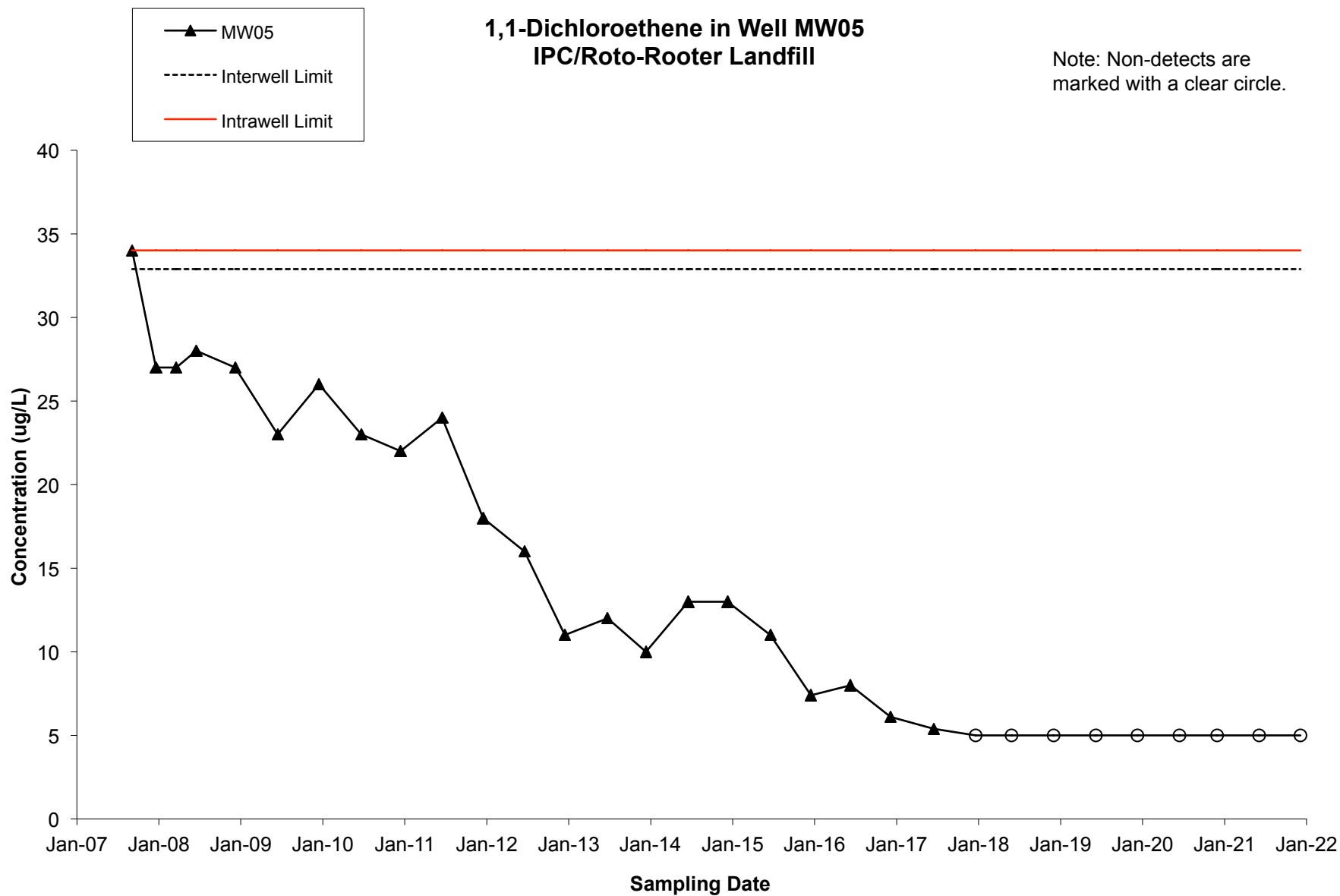
1,1-Dichloroethane in Well MW05 IPC/Roto-Rooter Landfill

Note: Non-detects are marked with a clear circle.



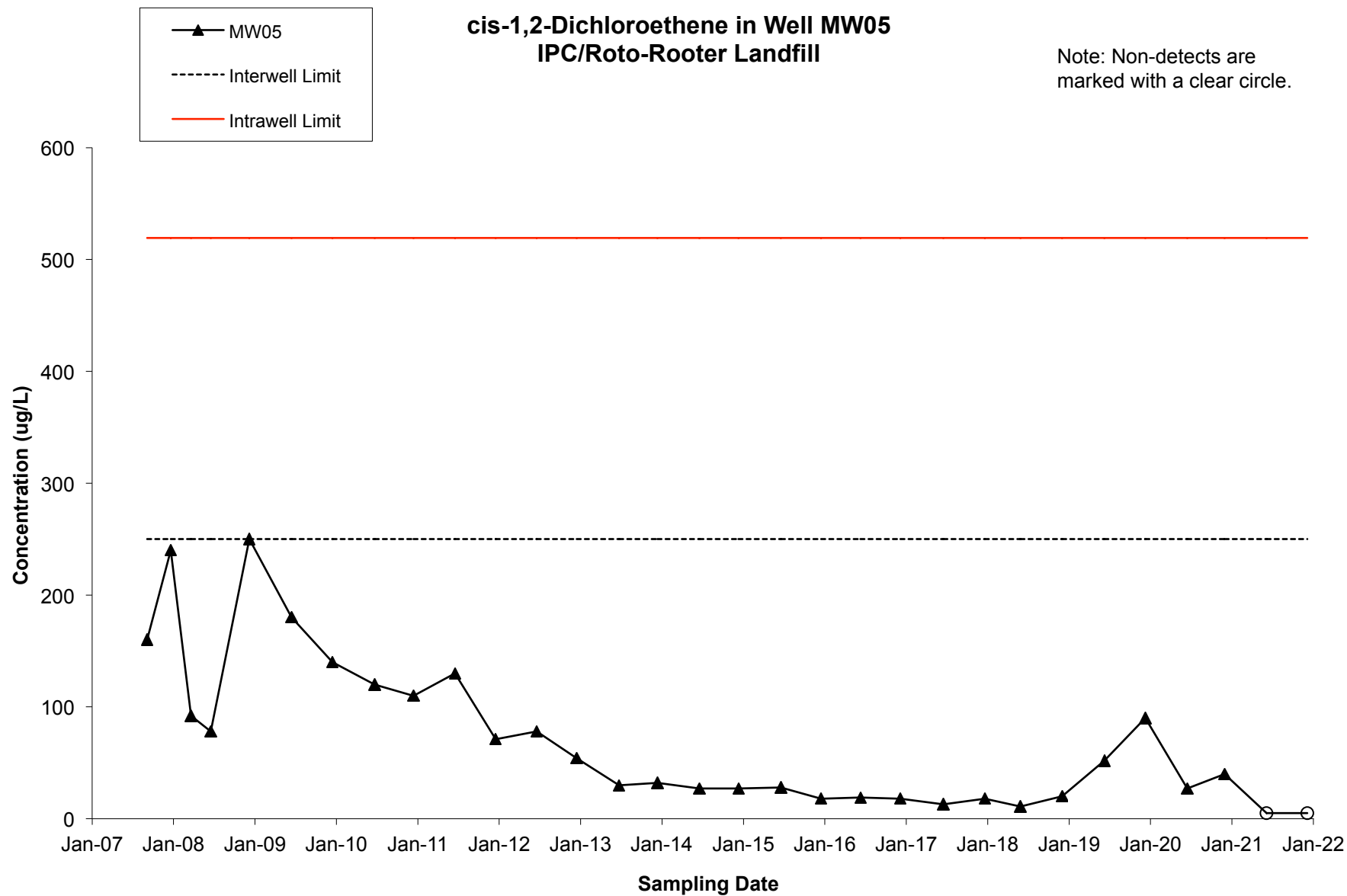
1,1-Dichloroethene in Well MW05 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



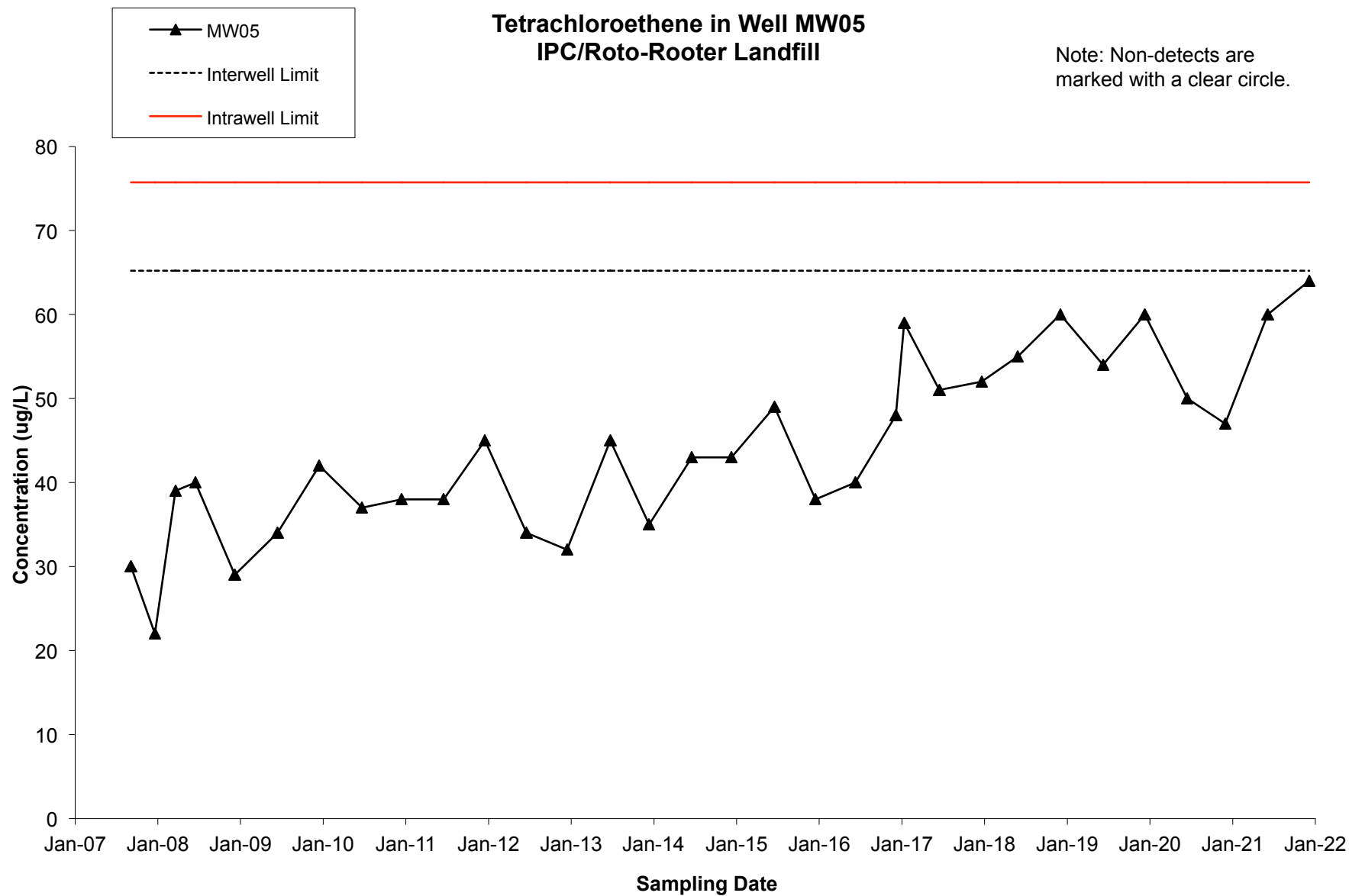
**cis-1,2-Dichloroethene in Well MW05
IPC/Roto-Rooter Landfill**

Note: Non-detects are
marked with a clear circle.



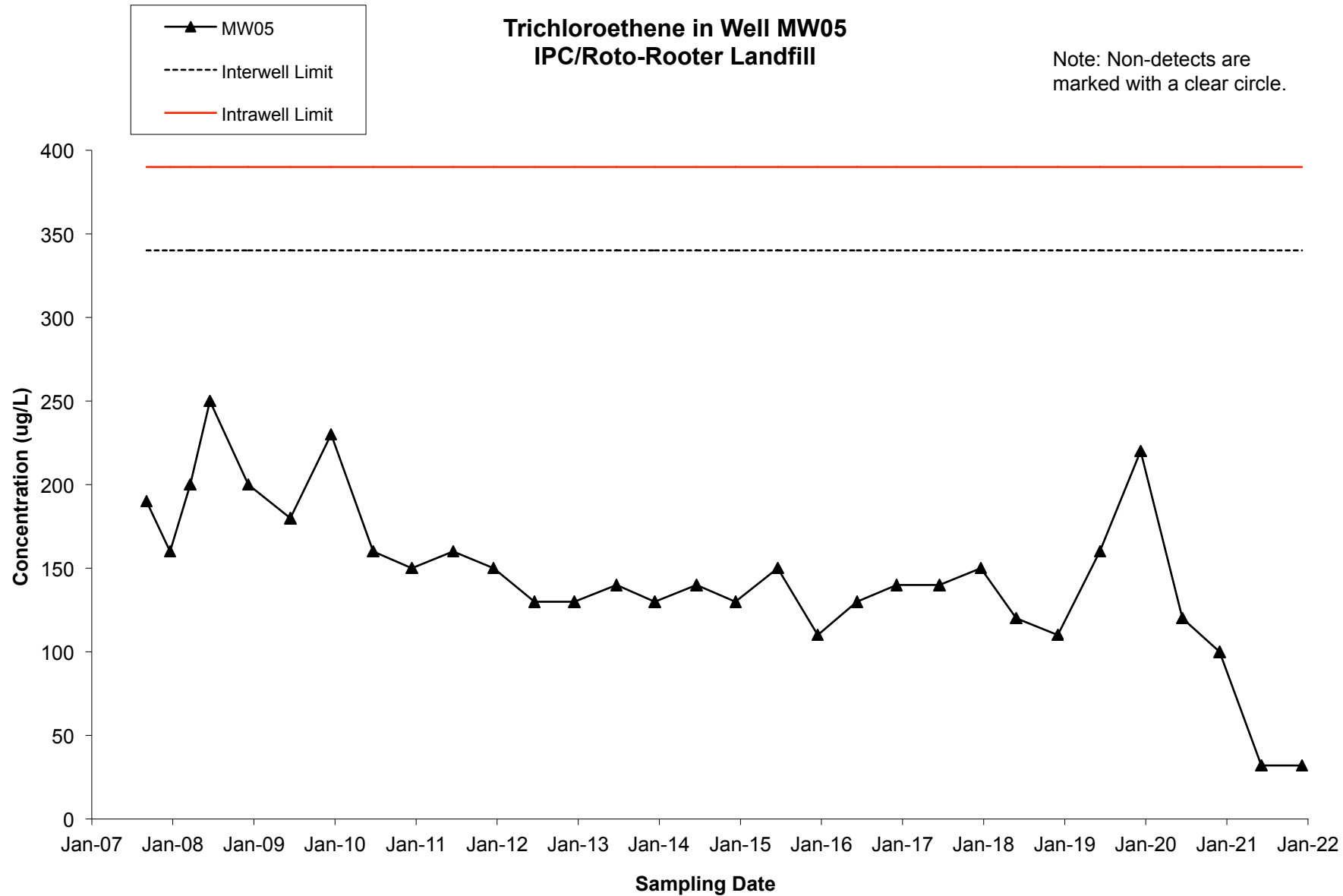
Tetrachloroethene in Well MW05 IPC/Roto-Rooter Landfill

Note: Non-detects are marked with a clear circle.



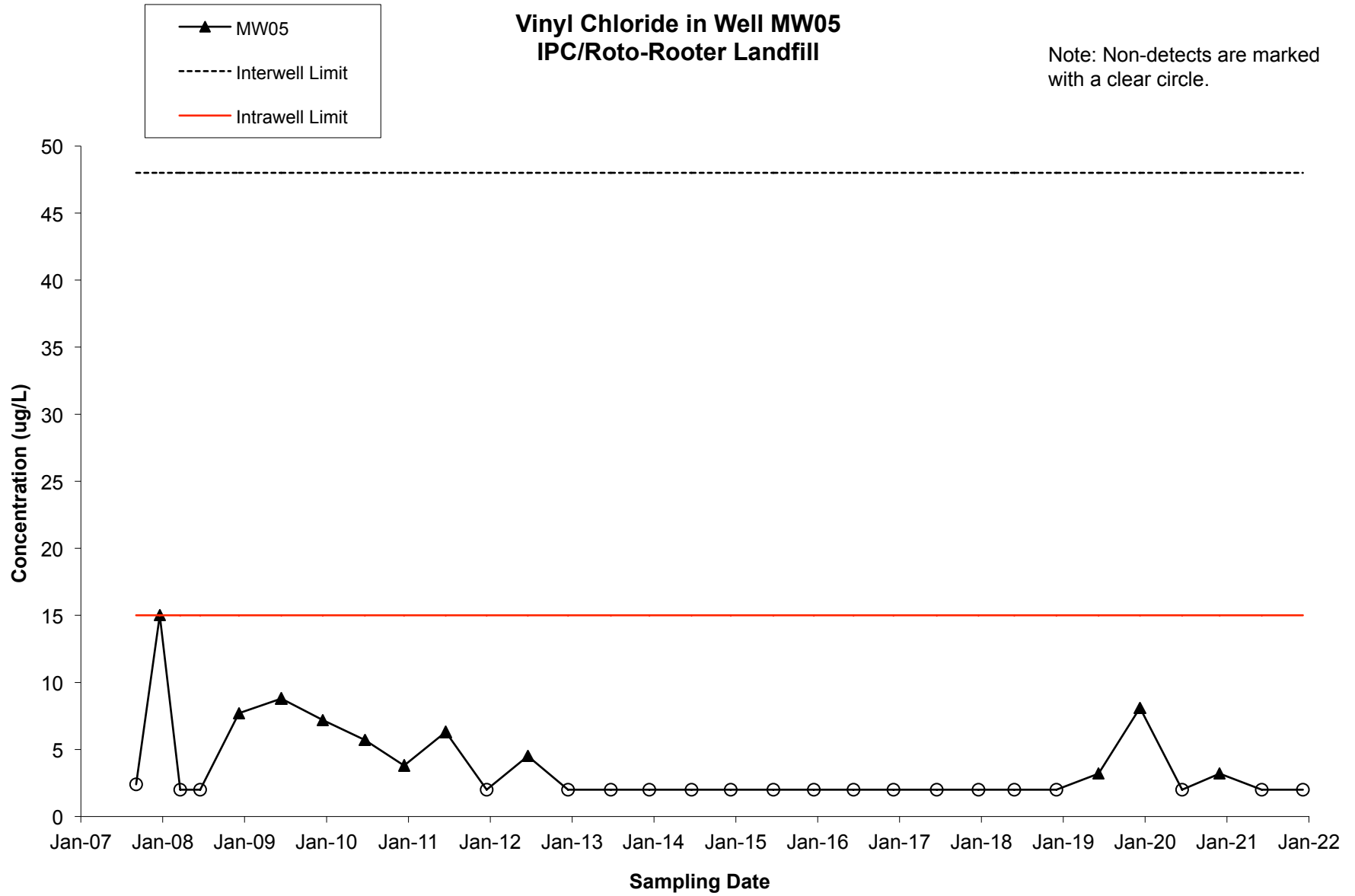
Trichloroethene in Well MW05 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



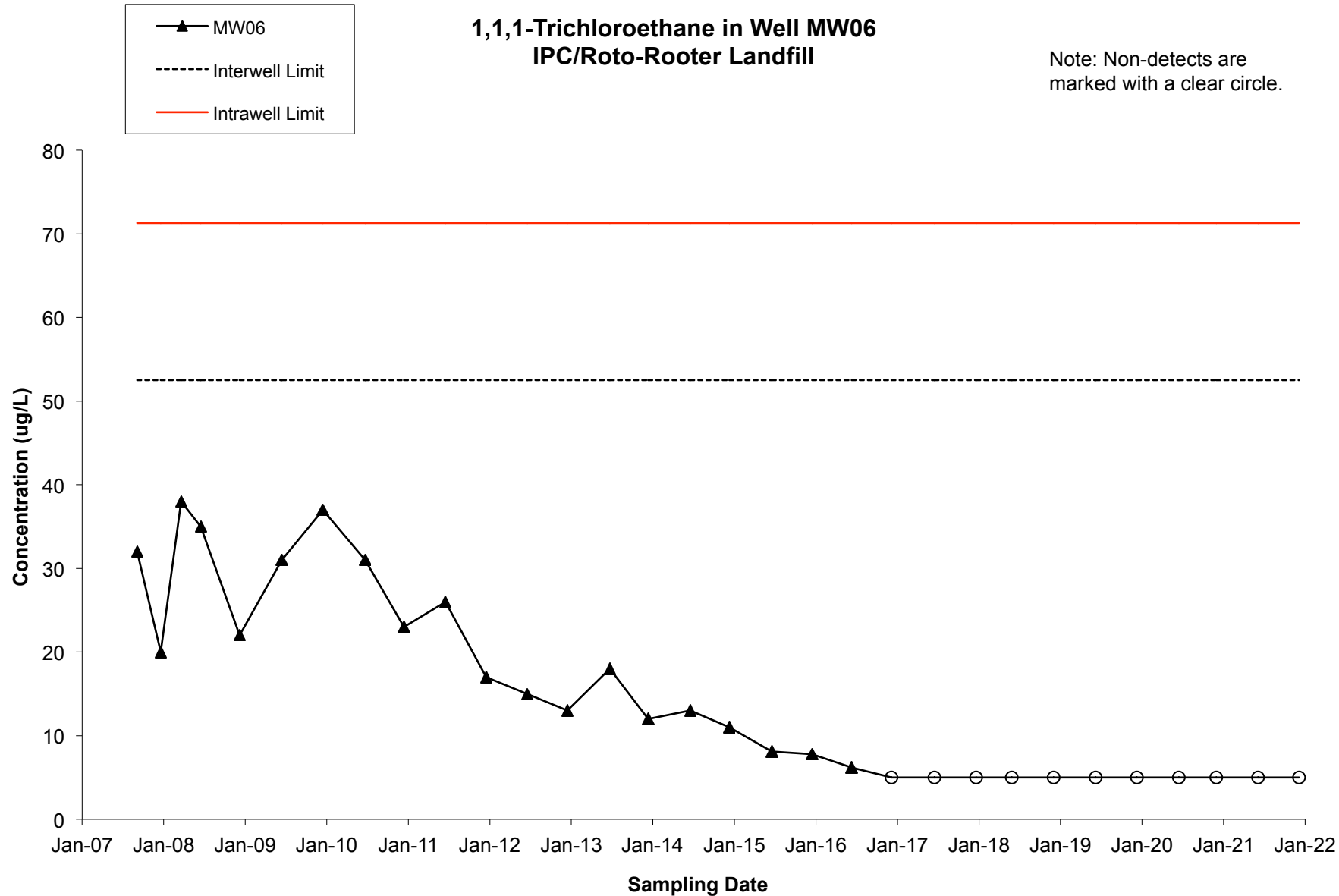
Vinyl Chloride in Well MW05 IPC/Roto-Rooter Landfill

Note: Non-detects are marked
with a clear circle.



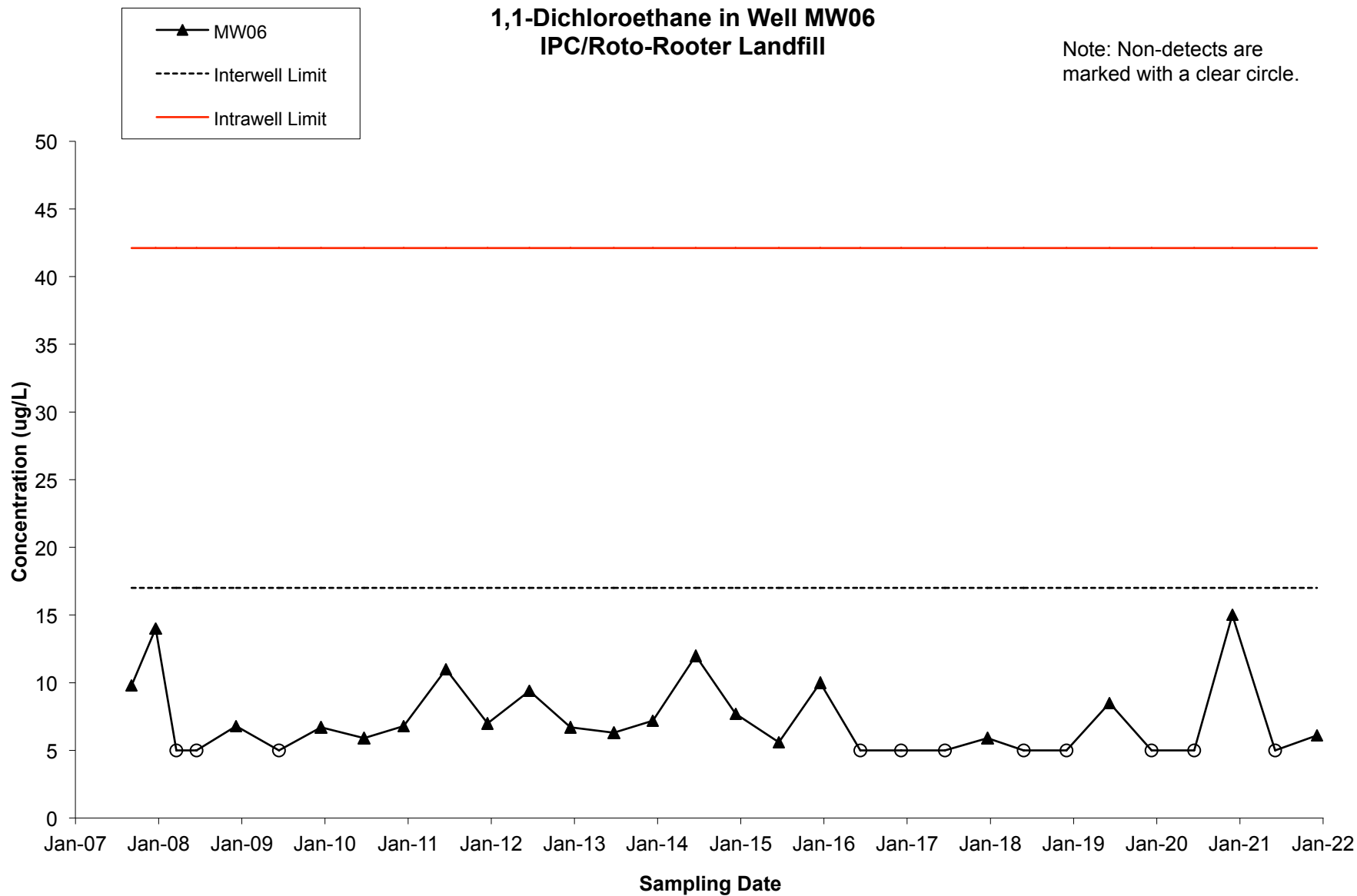
1,1,1-Trichloroethane in Well MW06 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



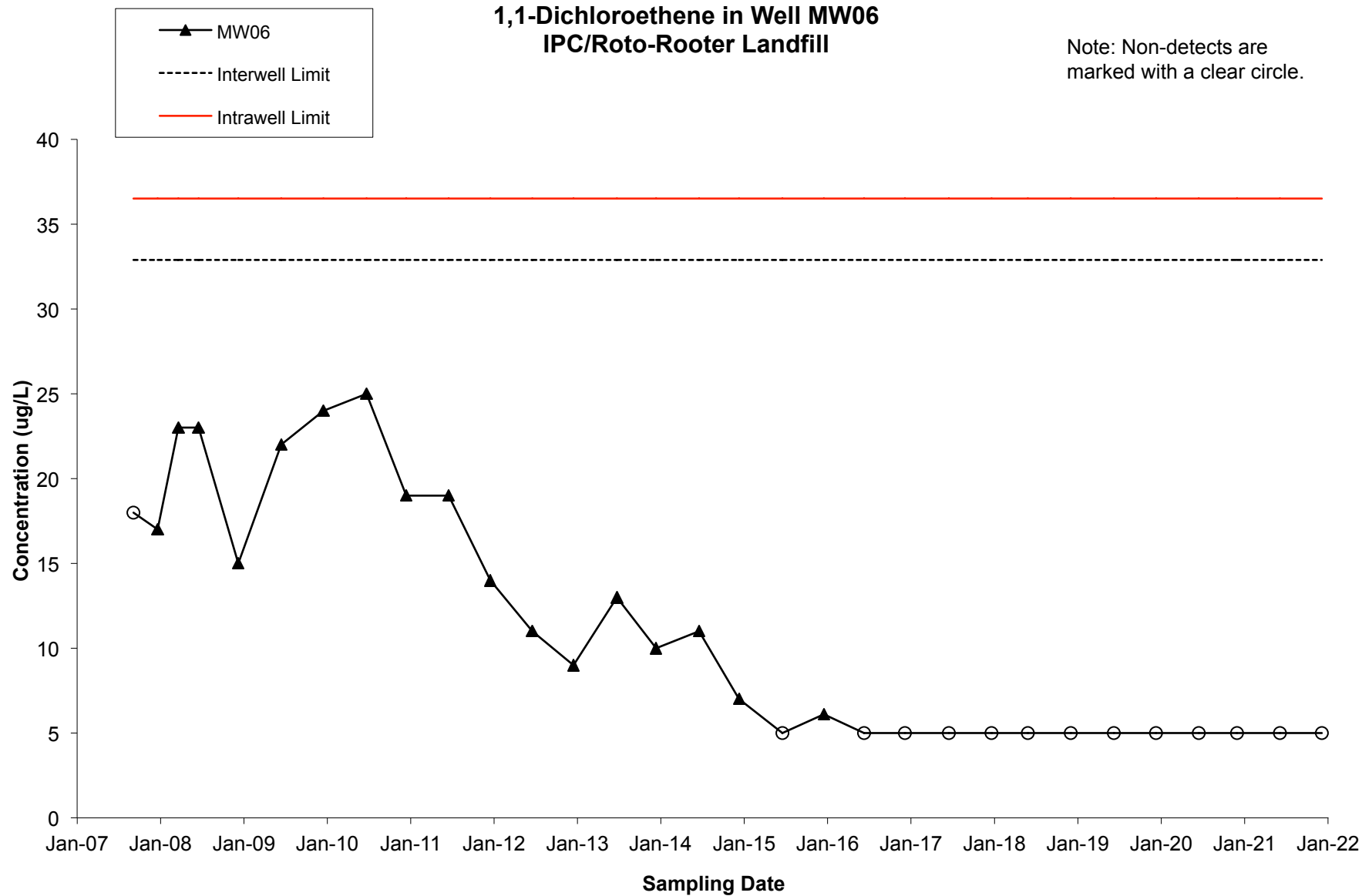
1,1-Dichloroethane in Well MW06 IPC/Roto-Rooter Landfill

Note: Non-detects are
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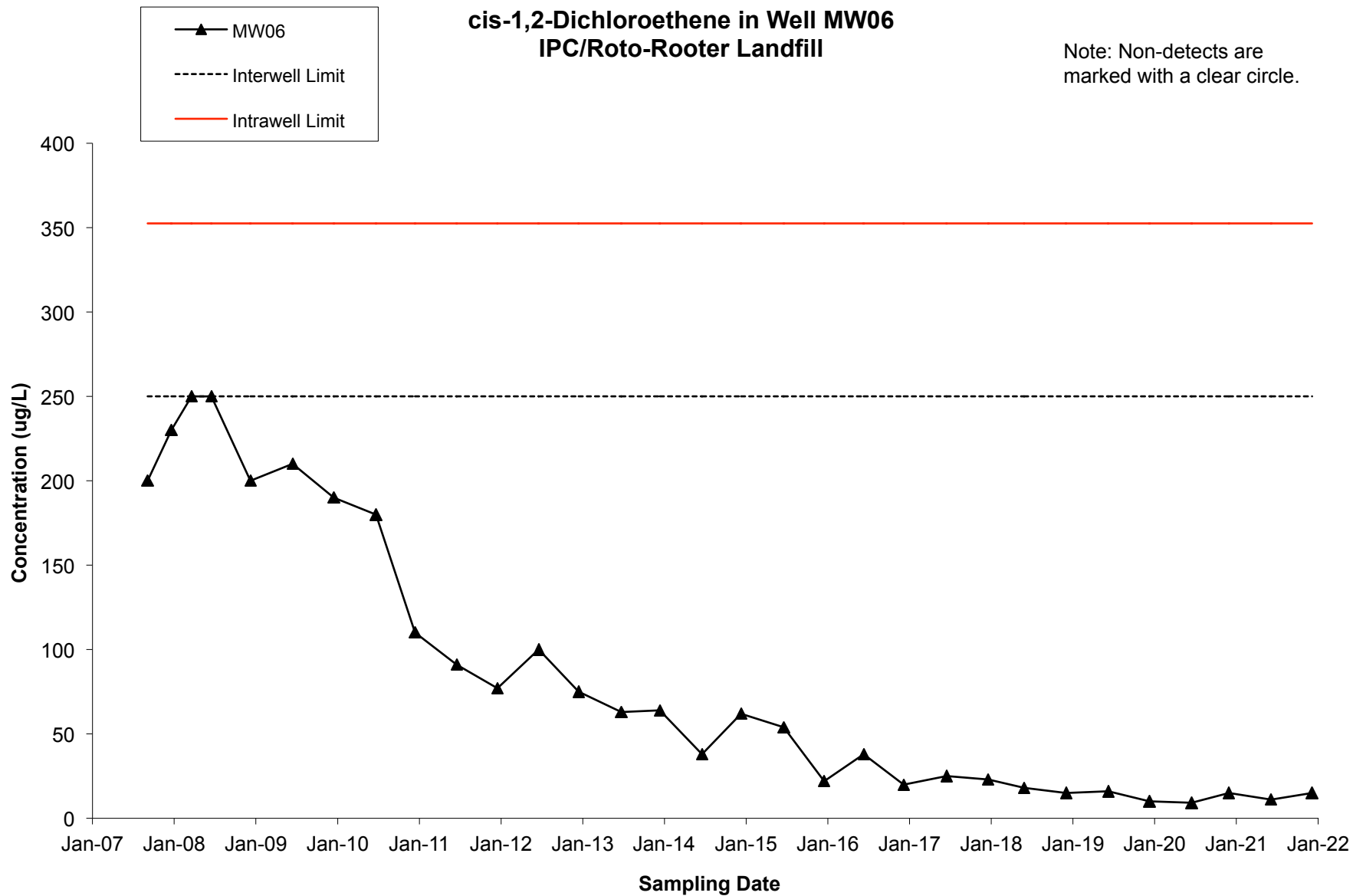
1,1-Dichloroethene in Well MW06 IPC/Roto-Rooter Landfill

Note: Non-detects are
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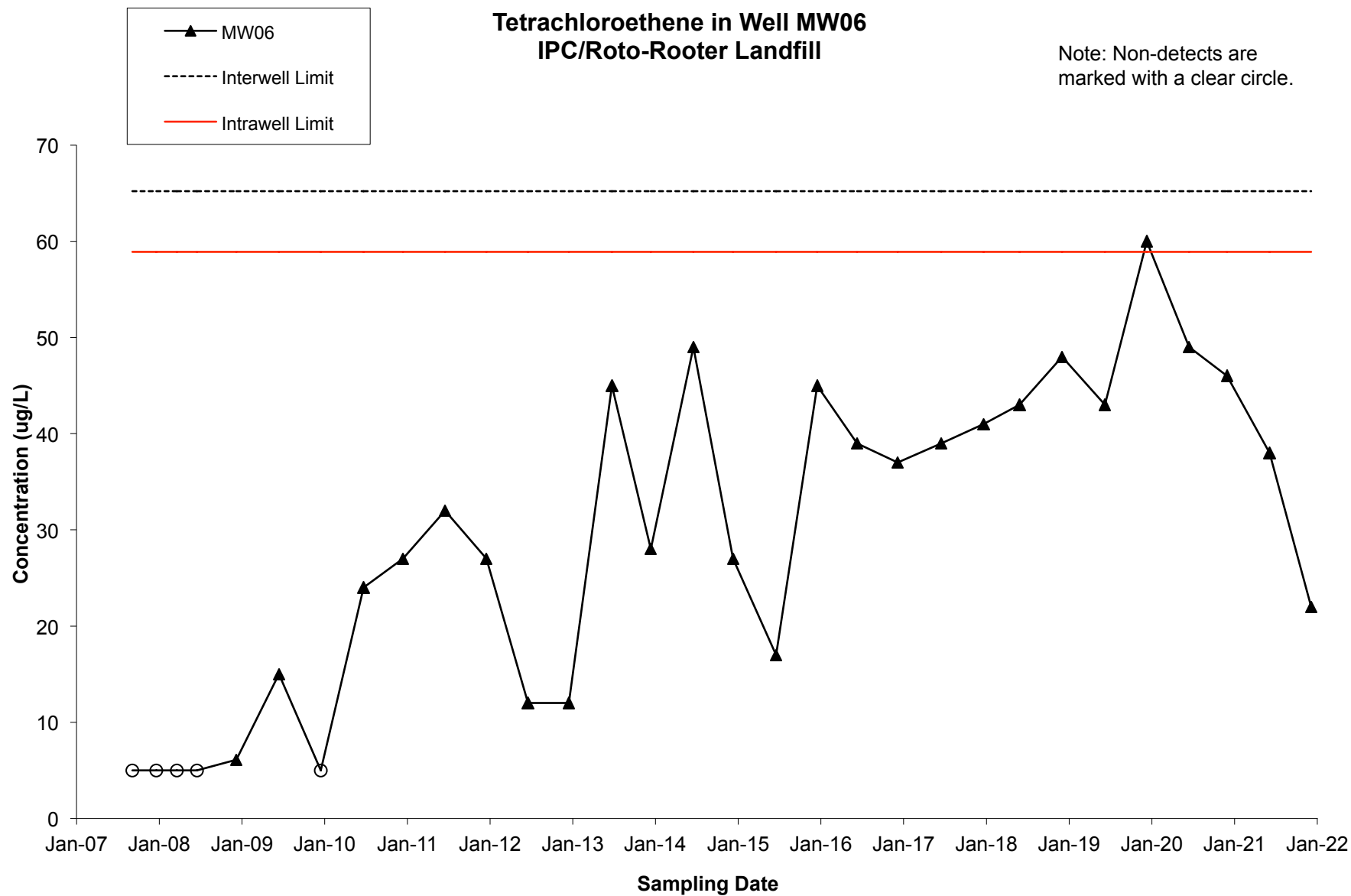
**cis-1,2-Dichloroethene in Well MW06
IPC/Roto-Rooter Landfill**

Note: Non-detects are
marked with a clear circle.



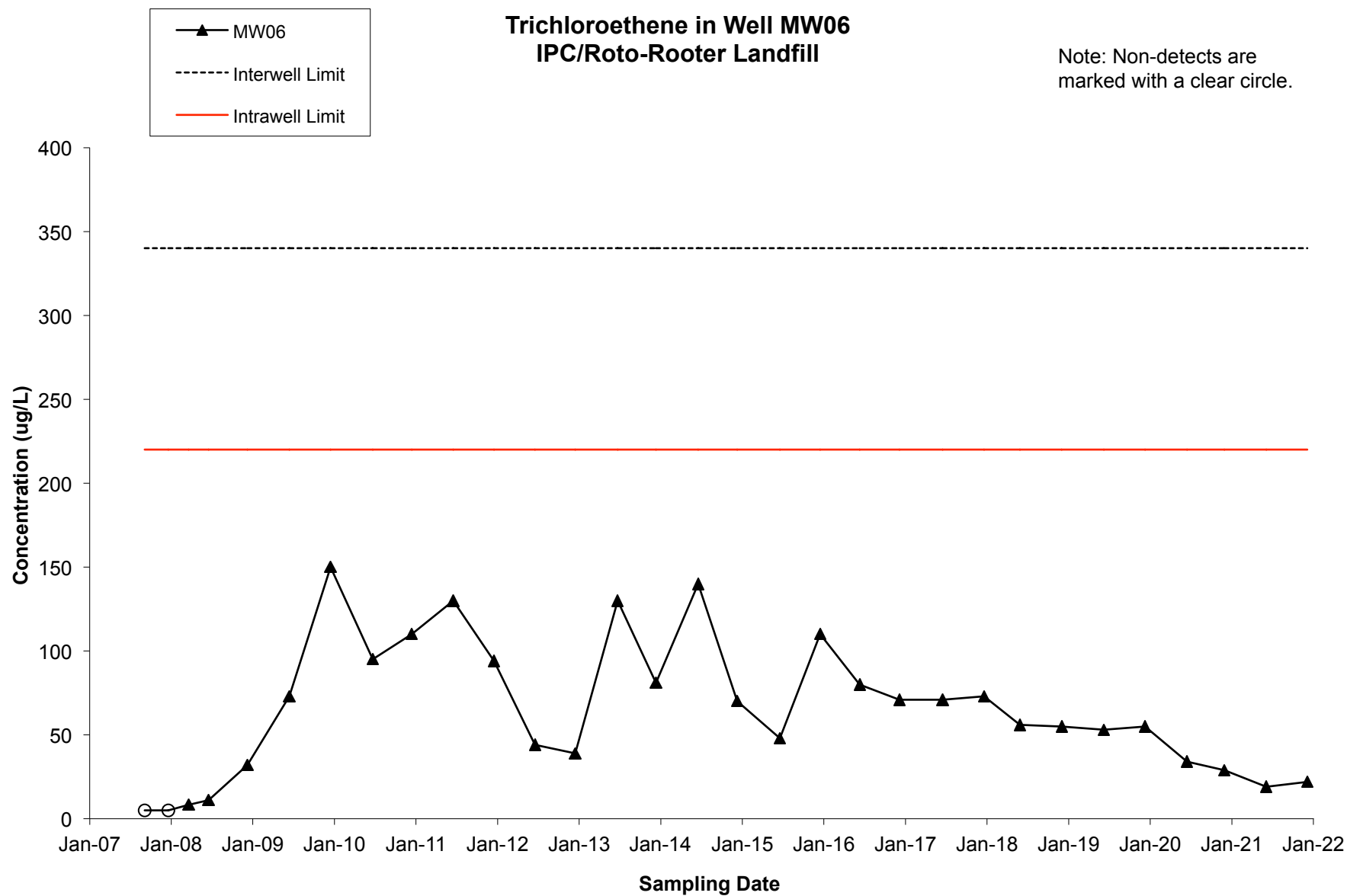
Tetrachloroethene in Well MW06 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



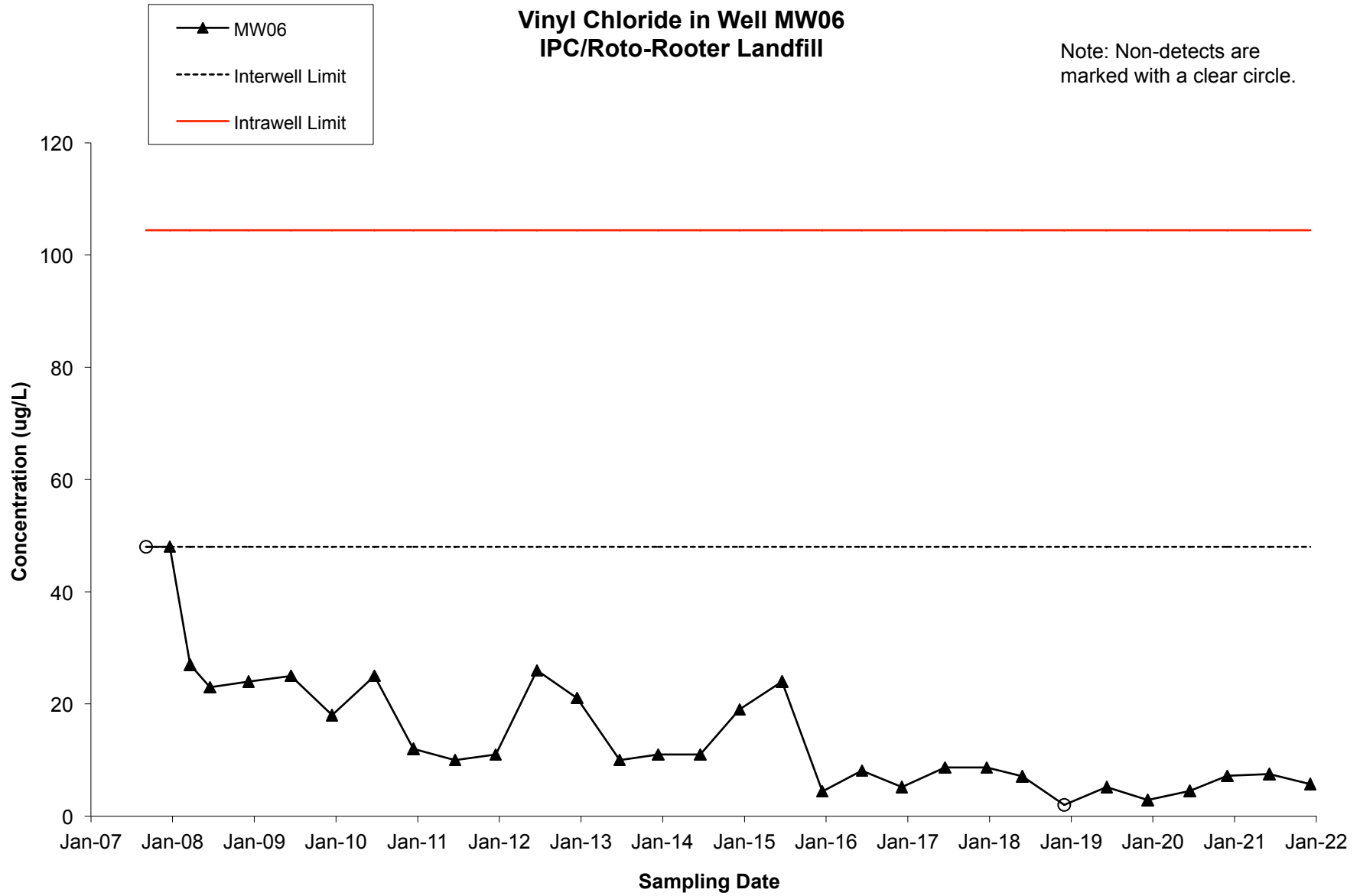
Trichloroethene in Well MW06 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



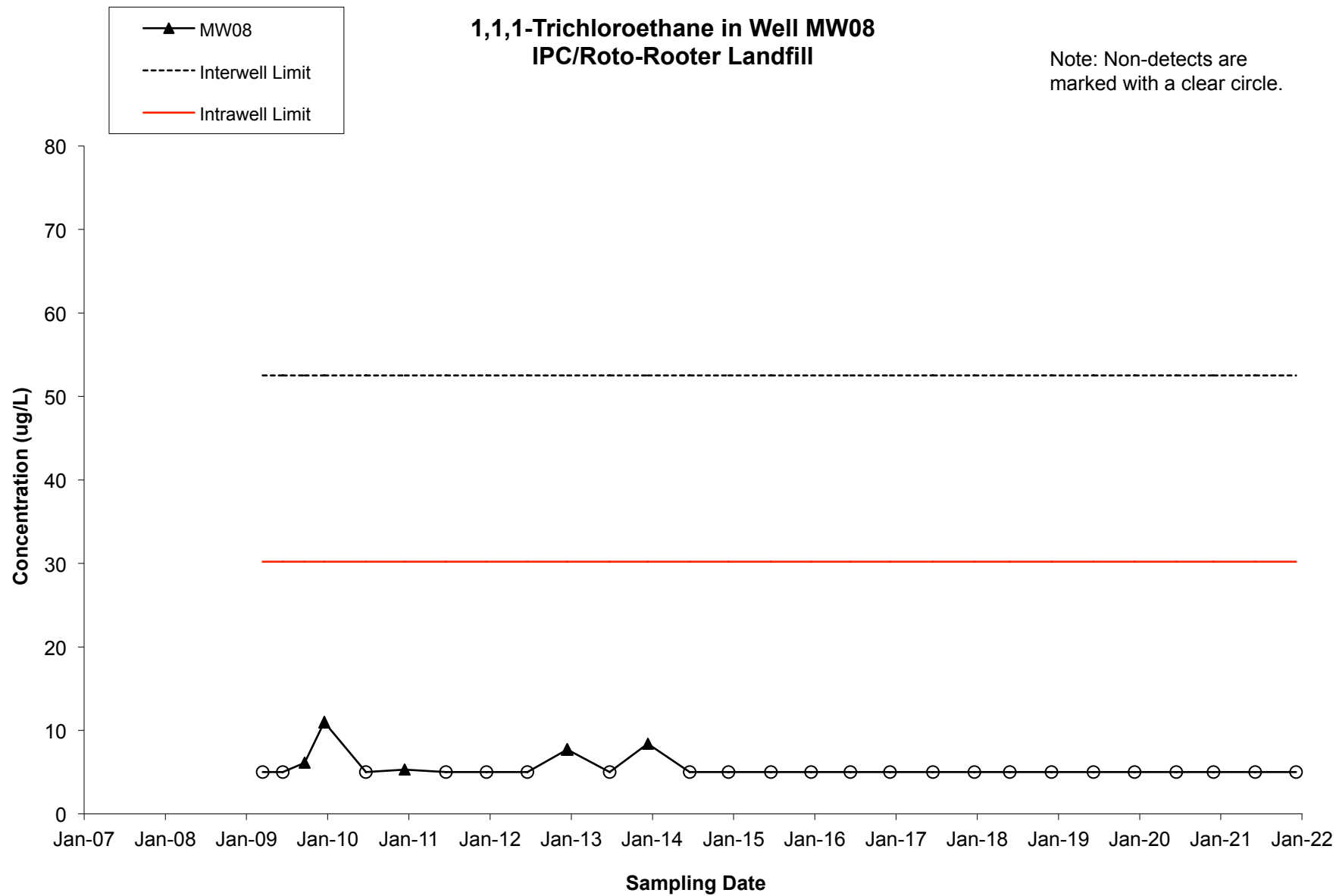
Vinyl Chloride in Well MW06 IPC/Roto-Rooter Landfill

Note: Non-detects are
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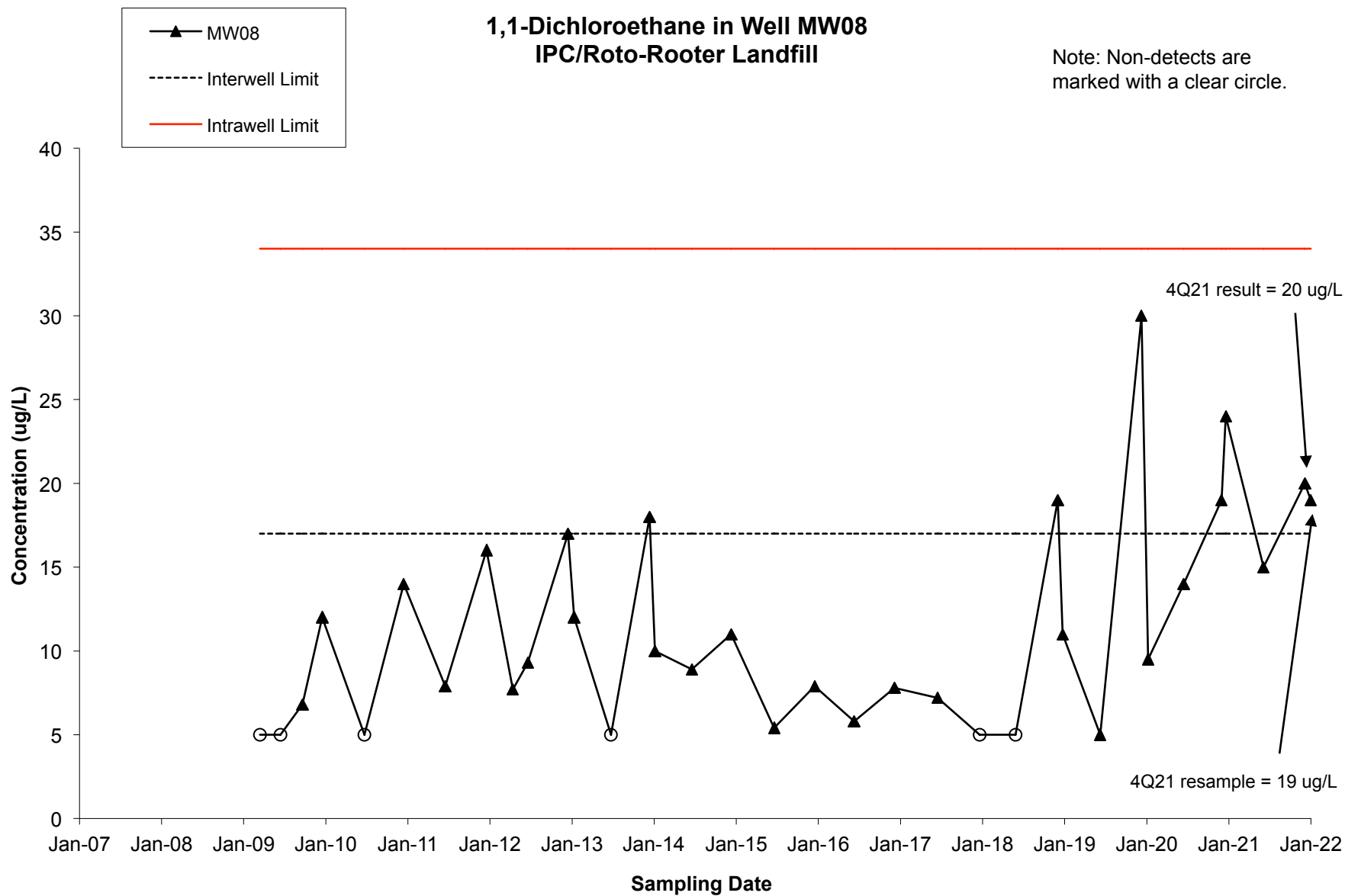
1,1,1-Trichloroethane in Well MW08 IPC/Roto-Rooter Landfill

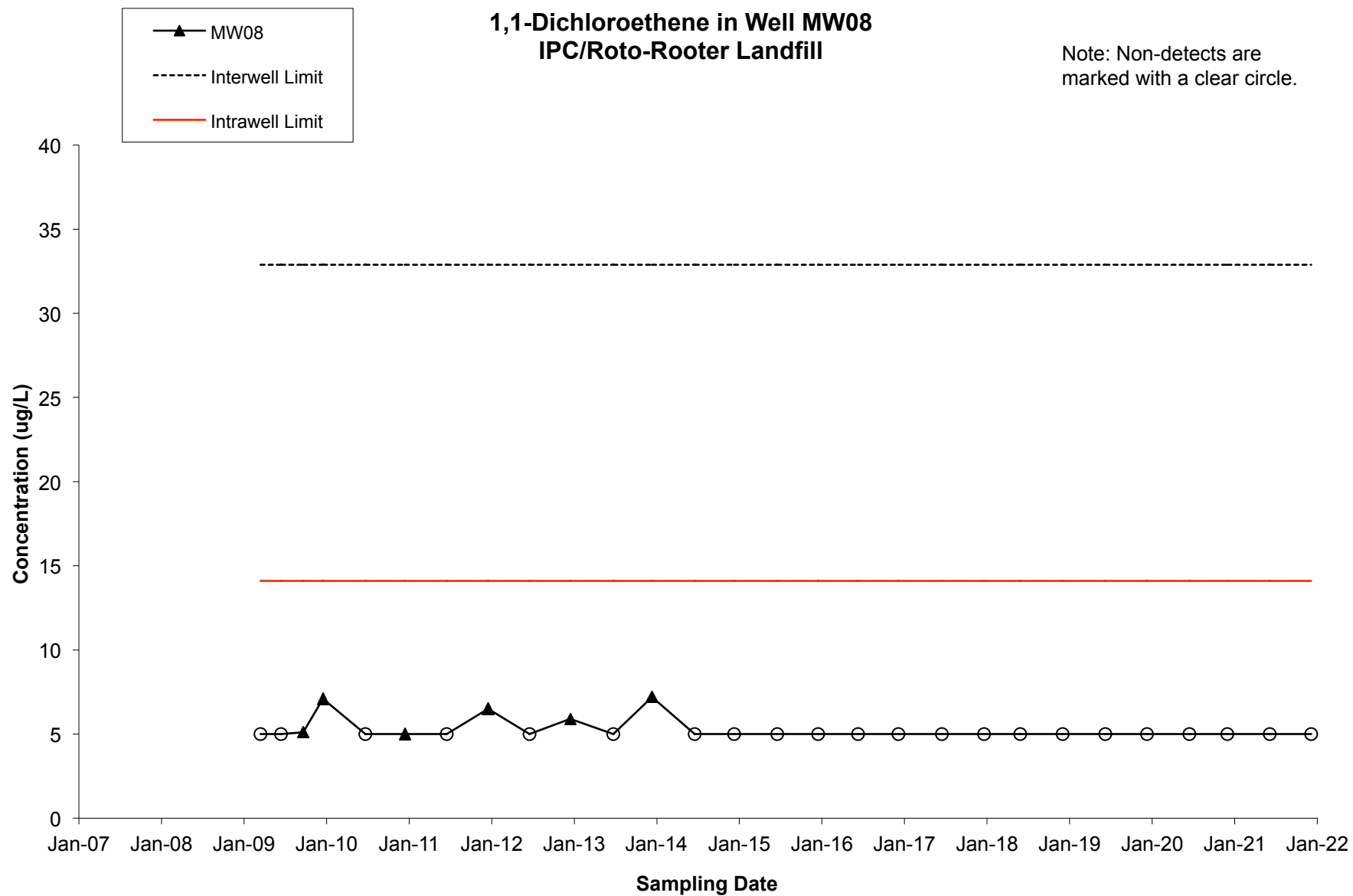
Note: Non-detects are marked with a clear circle.



1,1-Dichloroethane in Well MW08 IPC/Roto-Rooter Landfill

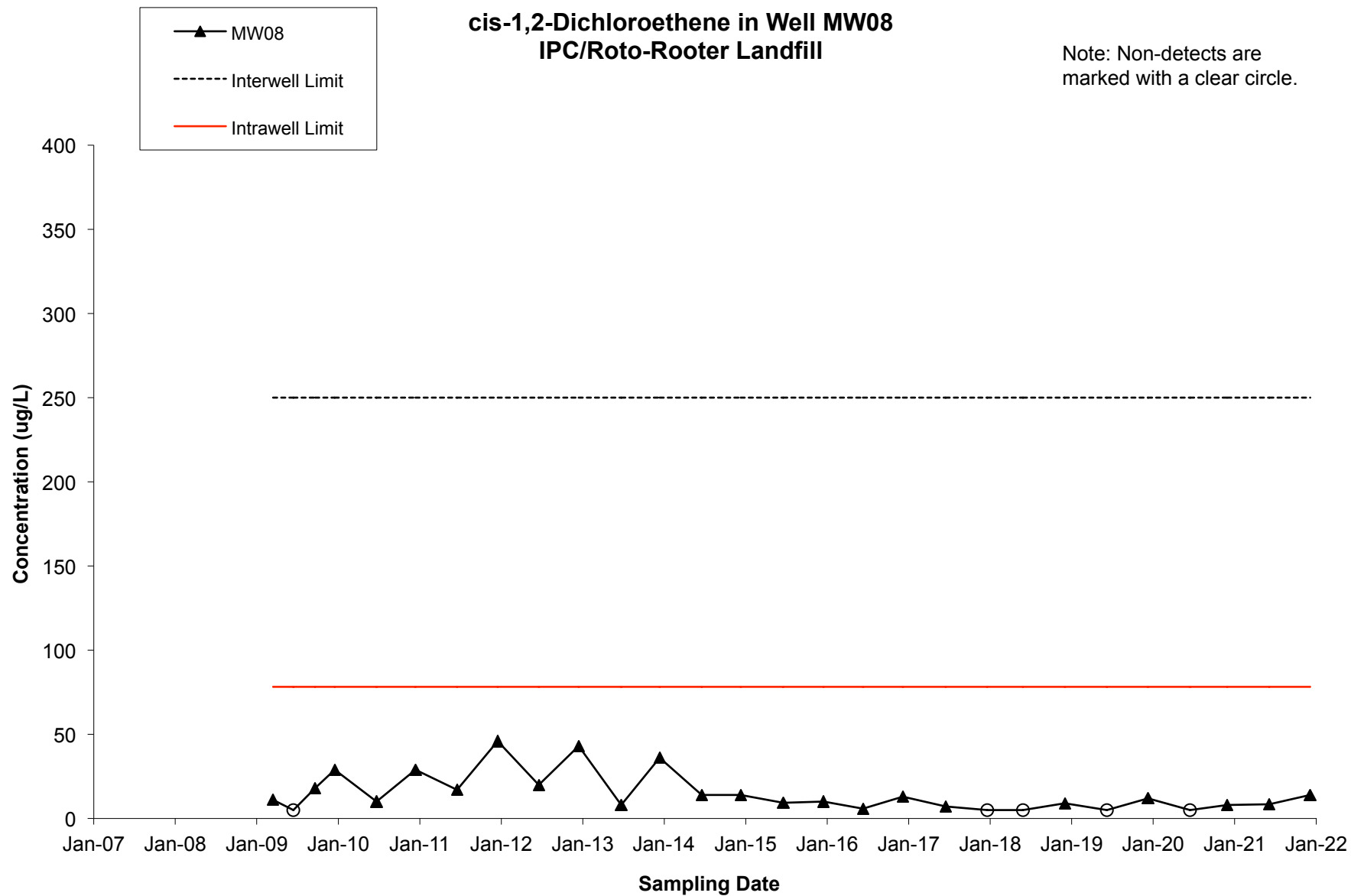
Note: Non-detects are marked with a clear circle.





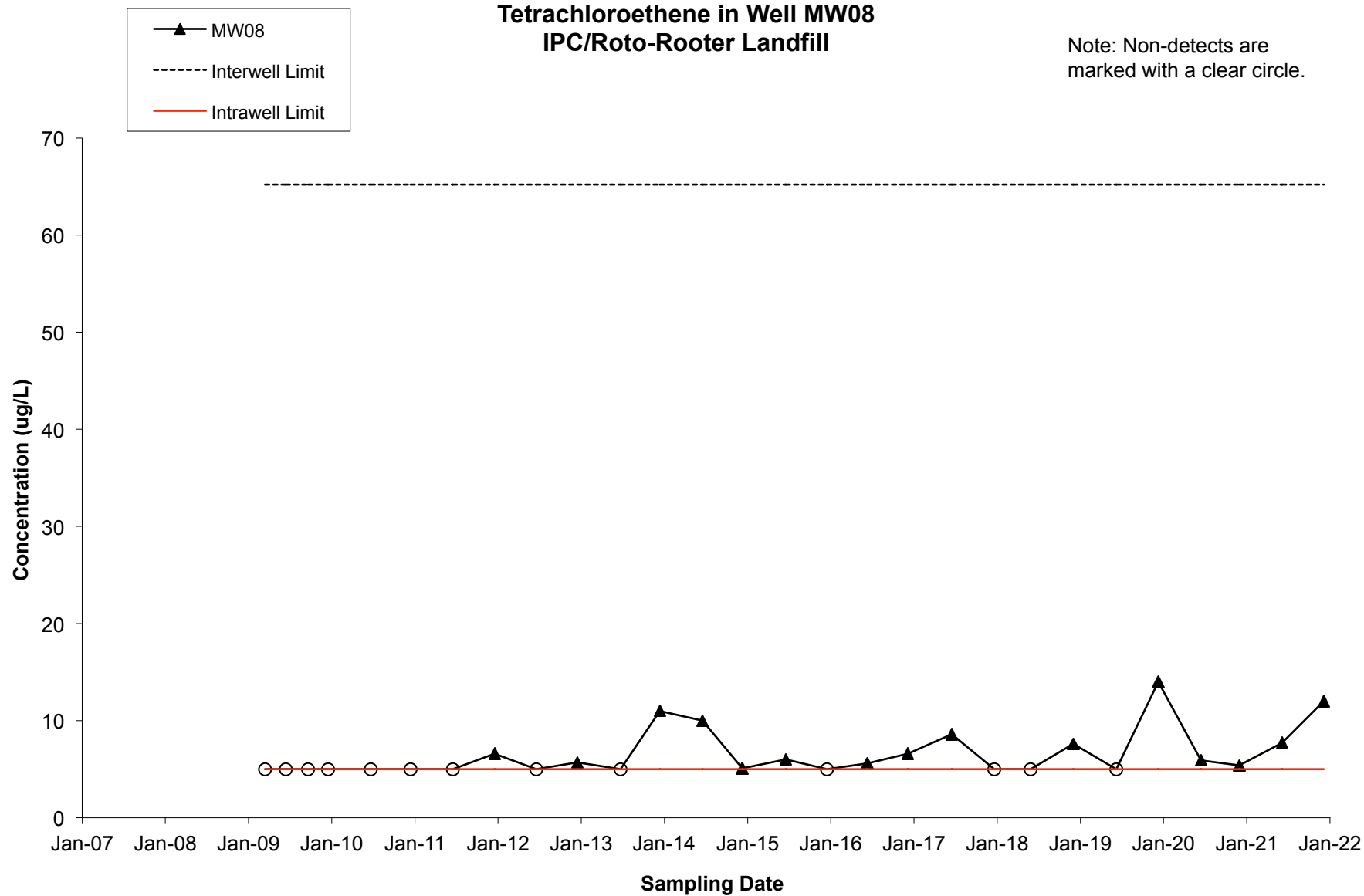
**cis-1,2-Dichloroethene in Well MW08
IPC/Roto-Rooter Landfill**

Note: Non-detects are
marked with a clear circle.



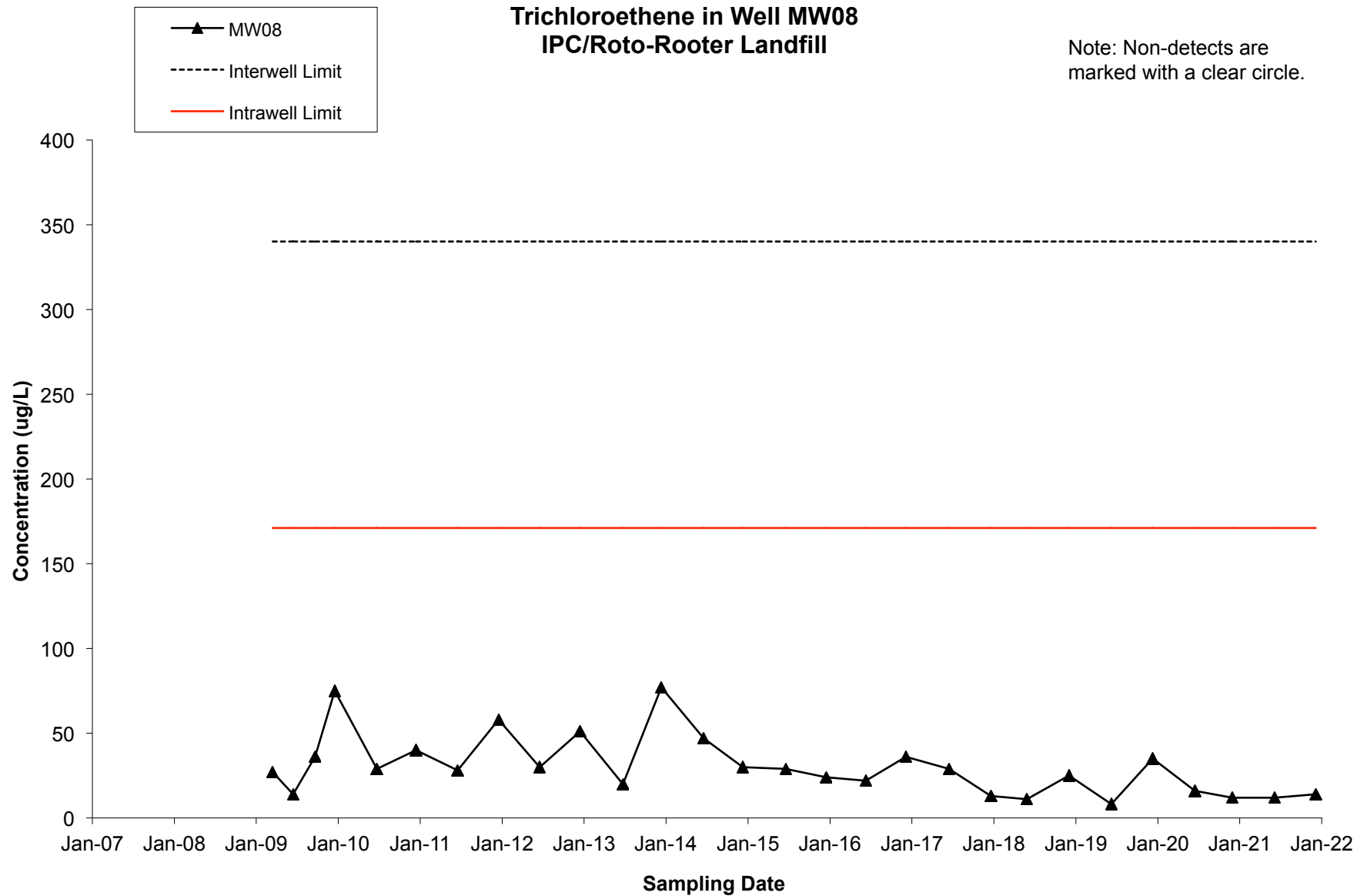
Tetrachloroethene in Well MW08 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



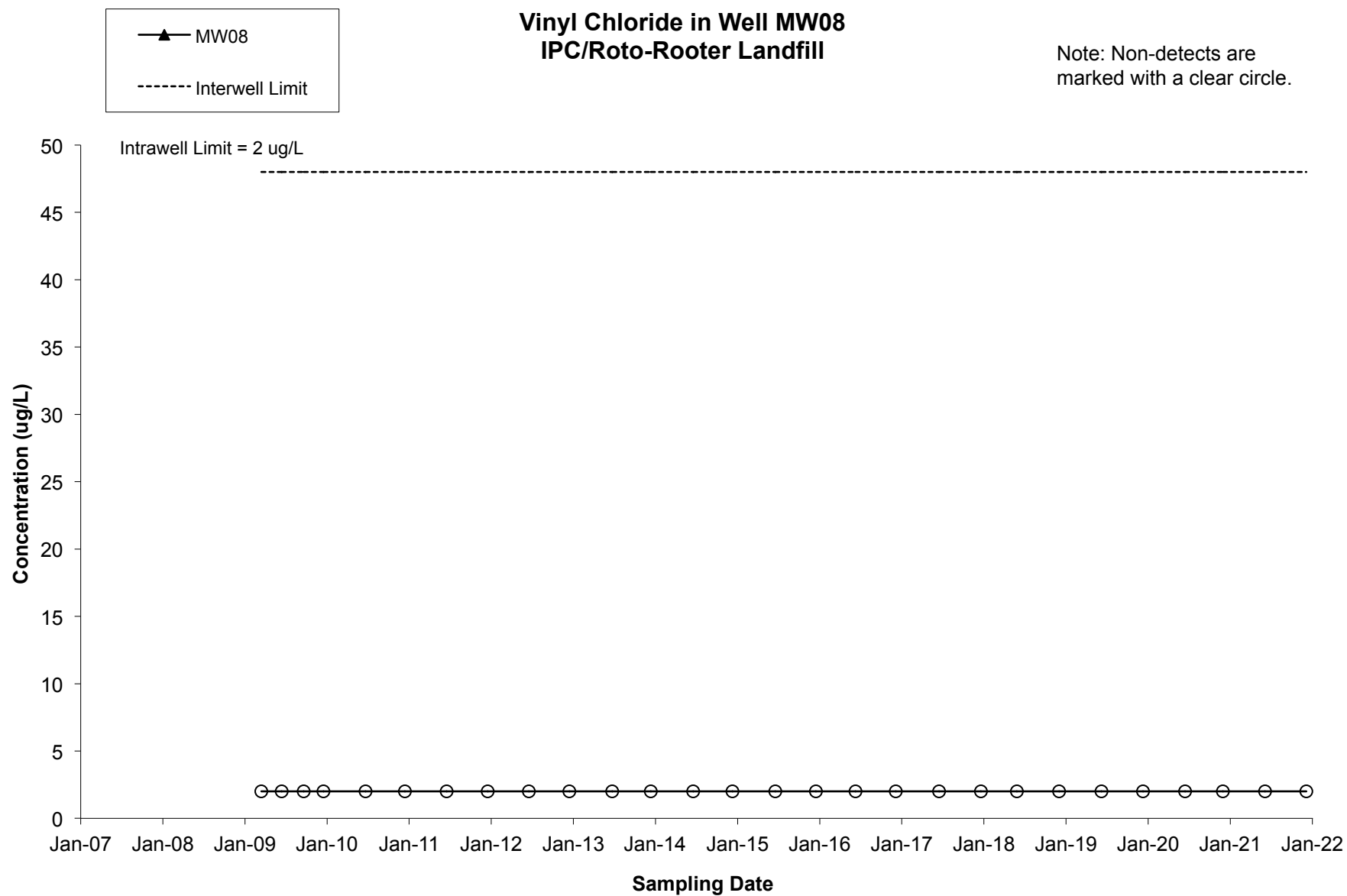
Trichloroethene in Well MW08 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



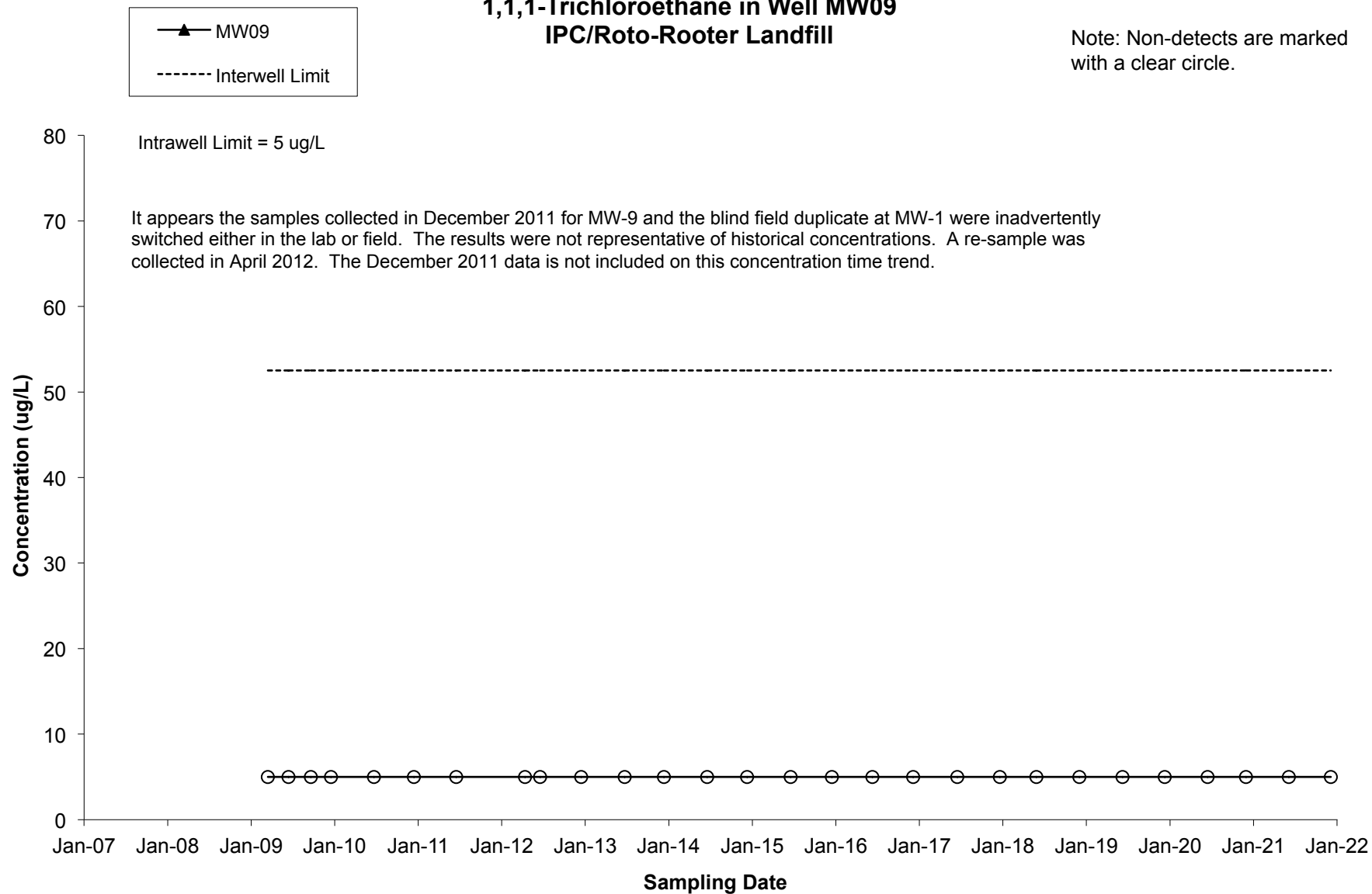
Vinyl Chloride in Well MW08 IPC/Roto-Rooter Landfill

Note: Non-detects are
marked with a clear circle.



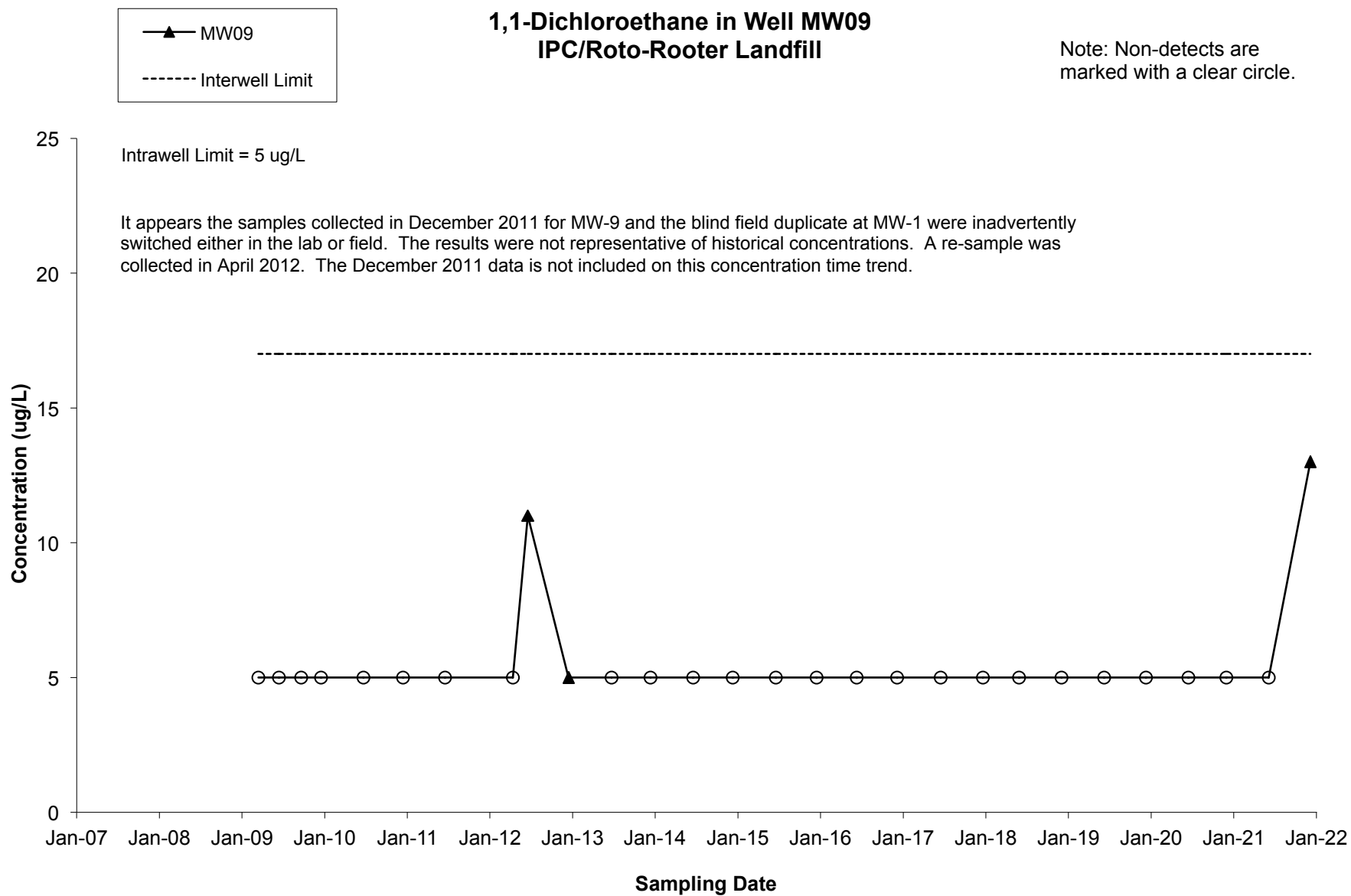
1,1,1-Trichloroethane in Well MW09 IPC/Roto-Rooter Landfill

Note: Non-detects are marked with a clear circle.



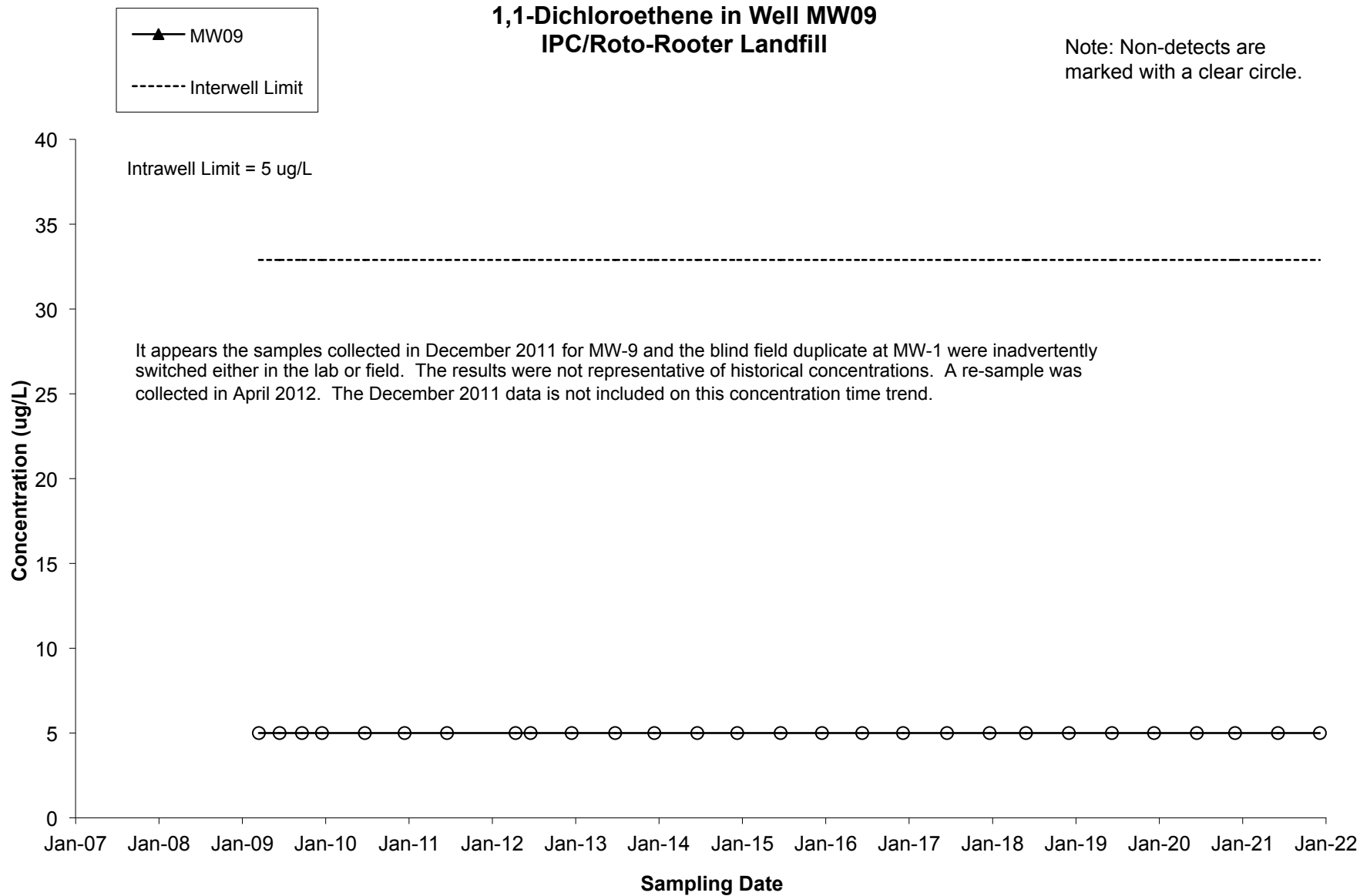
1,1-Dichloroethane in Well MW09 IPC/Roto-Rooter Landfill

Note: Non-detects are marked with a clear circle.



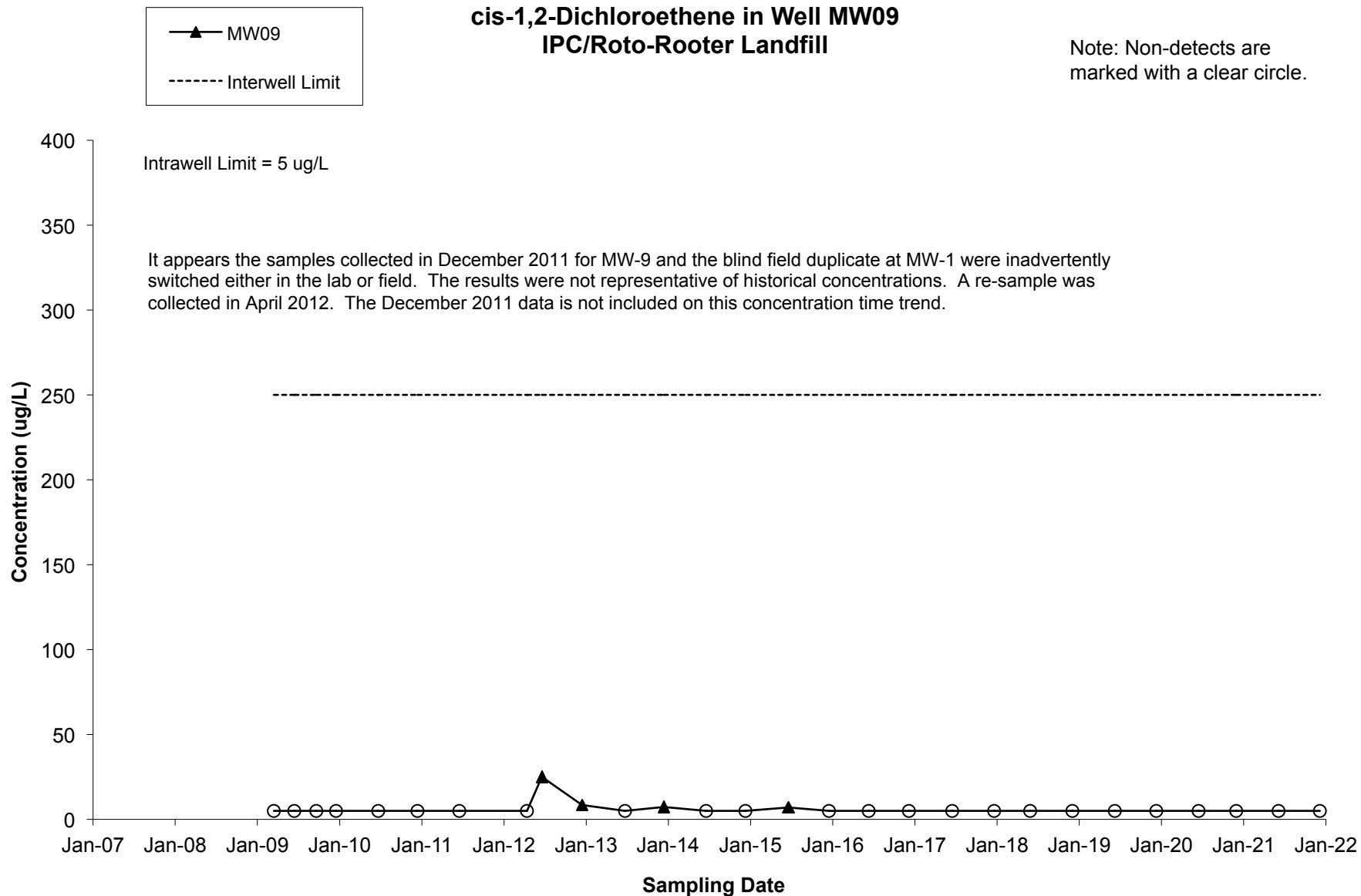
1,1-Dichloroethene in Well MW09 IPC/Roto-Rooter Landfill

Note: Non-detects are marked with a clear circle.



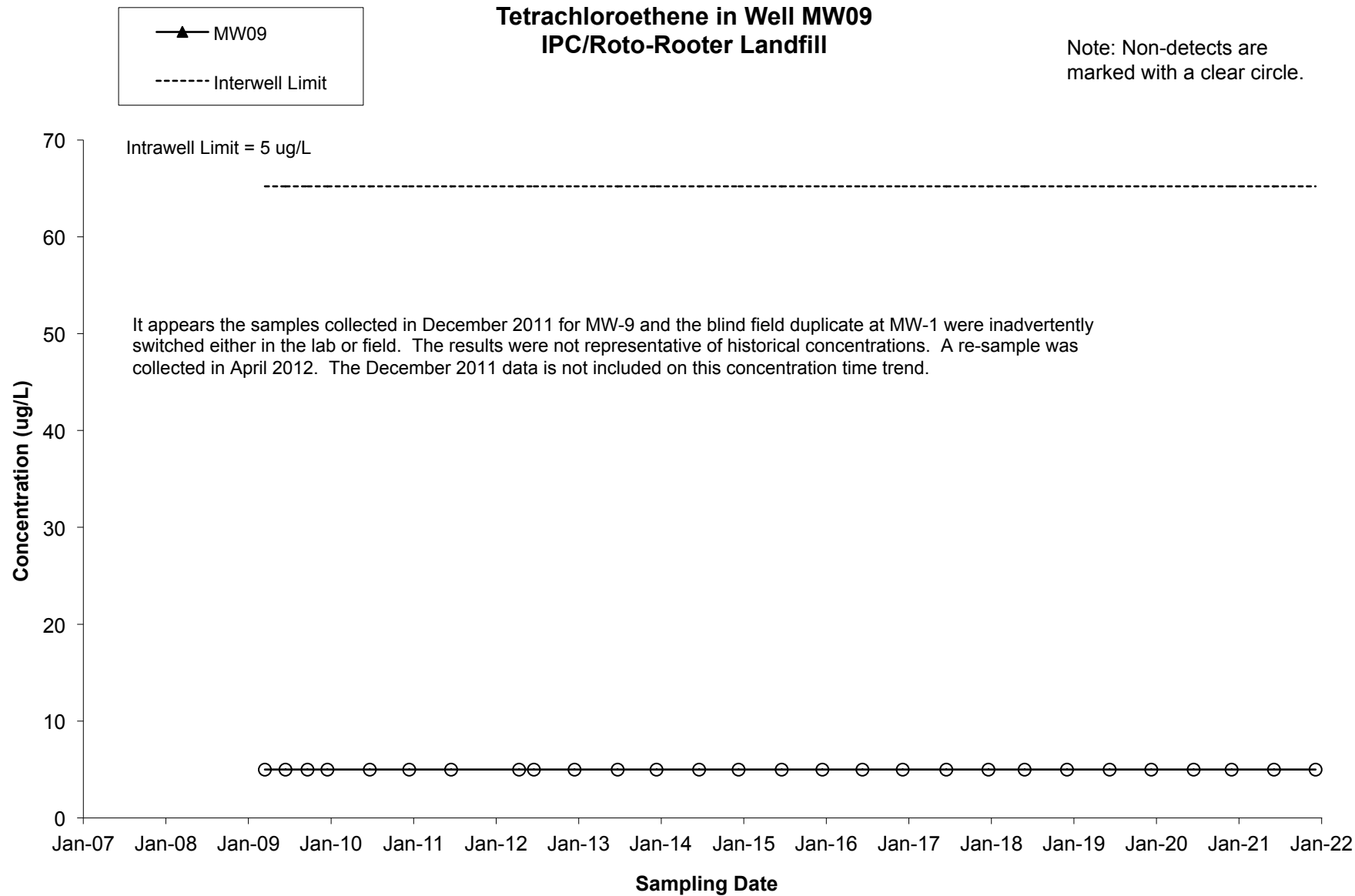
cis-1,2-Dichloroethene in Well MW09 IPC/Roto-Rooter Landfill

Note: Non-detects are marked with a clear circle.



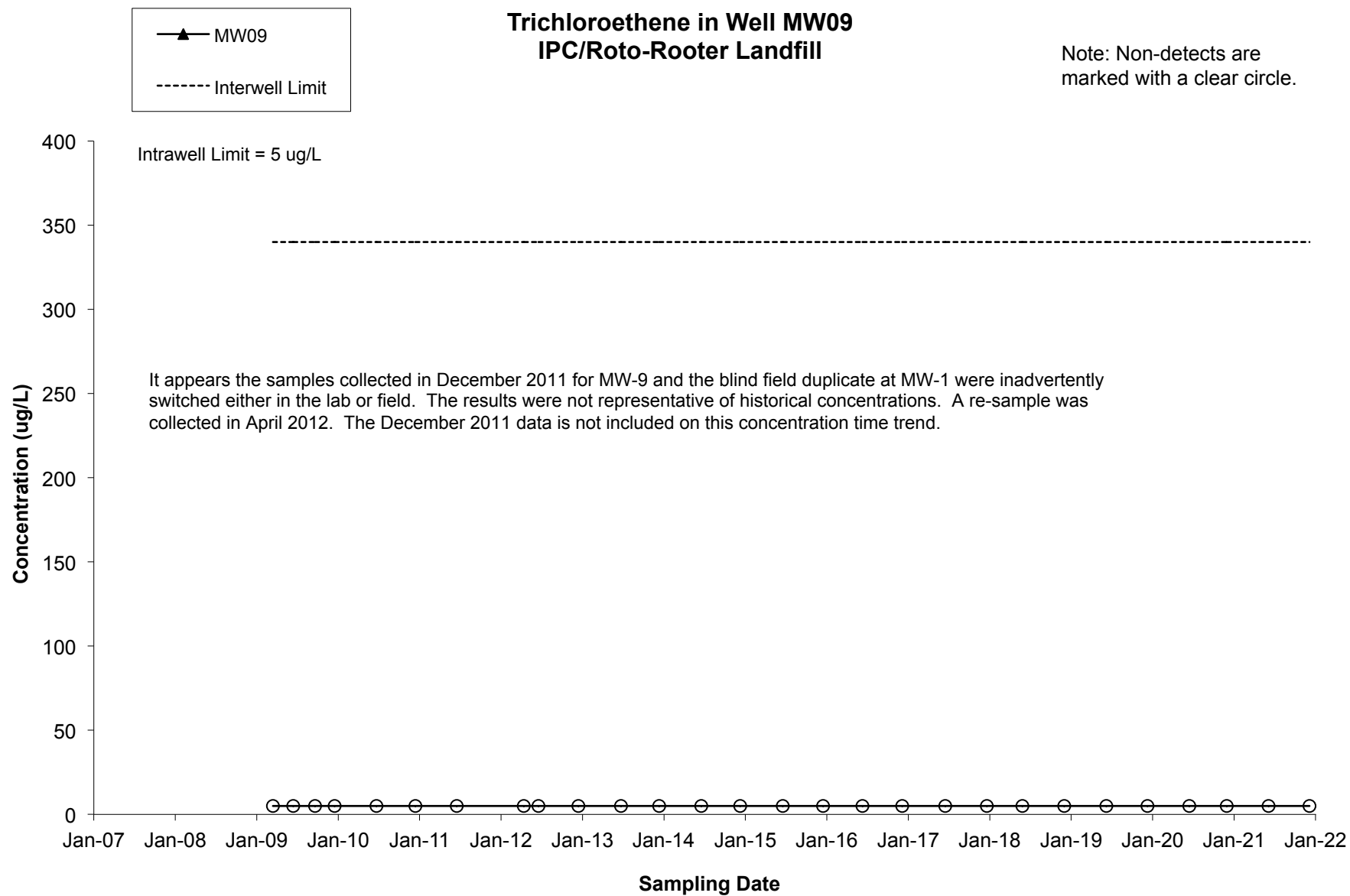
Tetrachloroethene in Well MW09 IPC/Roto-Rooter Landfill

Note: Non-detects are marked with a clear circle.



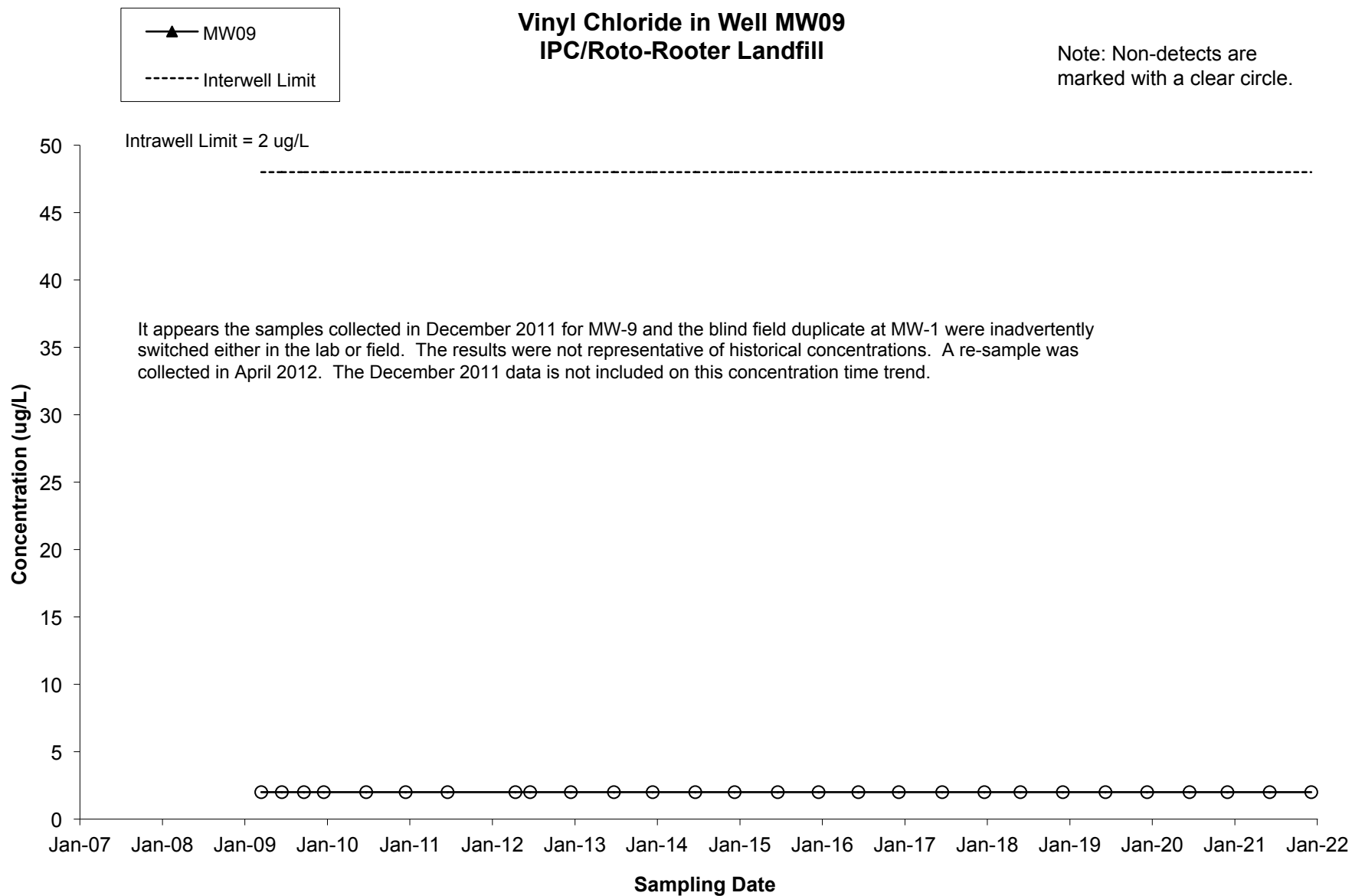
Trichloroethene in Well MW09 IPC/Roto-Rooter Landfill

Note: Non-detects are marked with a clear circle.



Vinyl Chloride in Well MW09 IPC/Roto-Rooter Landfill

Note: Non-detects are marked with a clear circle.



Attachment 3

Data Validation Summaries

Data Validation Checklist

Date:	2/8/2022
Validator Name:	Mary Pearson (EIL)
Facility:	Interstate Pollution Control - Roto Rooter
Facility Location:	Rockford, Illinois
Event:	December 2021
Laboratory:	Eurofins TestAmerica - Chicago
Sampling Dates:	12/16/2021
Laboratory Job No:	500-209995-1
Laboratory Analysis Batch Nos:	635673

	Yes	No	NA
Were the correct analytical methodologies used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were all samples analyzed within the VOC hold time (14 days)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were contaminants detected in the associated laboratory blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were contaminants detected in the associated trip blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were contaminants detected in the associated field blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Toluene was detected in the associated field blank (5.2 ug/L); however, this constituent was not detected in any of the monitoring wells.</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were surrogate recoveries within the appropriate control ranges?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were laboratory control spikes (LCS) within the appropriate control ranges?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were field duplicate samples within 20% relative percent difference (RPD) of the primary samples for all tested analytes?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Blind field duplicate (MW7) was collected at MW1.</i>			

Note: Matrix Spike (MS) / Matrix Spike Duplicate (MSD) was analyzed at well MW5. All MS/MSD and associated RPD recoveries were within acceptance limits.

Duplicate Sample Evaluation

December 2021

IPC Roto-Rooter Site

Parameter	Sample Date	Units	MW1	Qualifier	Blind Field Duplicate	Qualifier	RPD
1,1,1-Trichloroethane	12/16/2021	ug/L	5	U	5	U	0%
1,1,2,2-Tetrachloroethane	12/16/2021	ug/L	5	U	5	U	0%
1,1,2-Trichloroethane	12/16/2021	ug/L	5	U	5	U	0%
1,1-Dichloroethane	12/16/2021	ug/L	5	U	5	U	0%
1,1-Dichloroethene	12/16/2021	ug/L	5	U	5	U	0%
1,2-Dichloroethane	12/16/2021	ug/L	5	U	5	U	0%
1,2-Dichloropropane	12/16/2021	ug/L	5	U	5	U	0%
2-Hexanone	12/16/2021	ug/L	20	U	20	U	0%
Acetone	12/16/2021	ug/L	20	U	20	U	0%
Benzene	12/16/2021	ug/L	5	U	5	U	0%
Bromodichloromethane	12/16/2021	ug/L	5	U	5	U	0%
Bromoform	12/16/2021	ug/L	5	U	5	U	0%
Bromomethane	12/16/2021	ug/L	5	U	5	U	0%
Carbon disulfide	12/16/2021	ug/L	5	U	5	U	0%
Carbon tetrachloride	12/16/2021	ug/L	5	U	5	U	0%
Chlorobenzene	12/16/2021	ug/L	5	U	5	U	0%
Chloroethane	12/16/2021	ug/L	5	U	5	U	0%
Chloroform	12/16/2021	ug/L	5	U	5	U	0%
Chloromethane	12/16/2021	ug/L	5	U	5	U	0%
cis-1,2-Dichloroethene	12/16/2021	ug/L	38		37		3%
cis-1,3-Dichloropropene	12/16/2021	ug/L	5	U	5	U	0%
Dibromochloromethane	12/16/2021	ug/L	5	U	5	U	0%
Ethylbenzene	12/16/2021	ug/L	5	U	5	U	0%
Methyl Ethyl Ketone	12/16/2021	ug/L	20	U	20	U	0%
Methyl Isobutyl Ketone	12/16/2021	ug/L	20	U	20	U	0%
Methylene Chloride	12/16/2021	ug/L	10	U	10	U	0%
Styrene	12/16/2021	ug/L	5	U	5	U	0%
Tetrachloroethene	12/16/2021	ug/L	6.4		5.5		15%
Toluene	12/16/2021	ug/L	5	U	5	U	0%
trans-1,2-Dichloroethene	12/16/2021	ug/L	5	U	5	U	0%
trans-1,3-Dichloropropene	12/16/2021	ug/L	5	U	5	U	0%
Trichloroethene	12/16/2021	ug/L	8.1		6.9		16%
Vinyl chloride	12/16/2021	ug/L	9.3		10		7%
Xylenes, Total	12/16/2021	ug/L	5	U	5	U	0%

Qualifier U - Not Detected

Chemicals of Concern are highlighted in gray.

The blind field duplicate (MW7) was taken at well MW1.

Data Validation Checklist

Date:	2/8/2022
Validator Name:	Mary Pearson (EIL)
Facility:	Interstate Pollution Control - Roto Rooter
Facility Location:	Rockford, Illinois
Event:	December 2021 Resample
Laboratory:	Eurofins TestAmerica - Chicago
Sampling Dates:	1/11/2022
Laboratory Job No:	500-210799-1
Laboratory Analysis Batch Nos:	637792

	Yes	No	NA
Were the correct analytical methodologies used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were all samples analyzed within the VOC hold time (14 days)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were contaminants detected in the associated laboratory blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were contaminants detected in the associated trip blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were contaminants detected in the associated field blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were surrogate recoveries within the appropriate control ranges?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were laboratory control spikes (LCS) within the appropriate control ranges?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were field duplicate samples within 20% relative percent difference (RPD) of the primary samples for all tested analytes?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: Matrix Spike (MS) / Matrix Spike Duplicate (MSD) was analyzed on MW8 Field Duplicate Sample. The MS/MSD and associated RPD recoveries were within acceptance limits.

Duplicate Sample Evaluation
December 2021 Resample Event
IPC Roto-Rooter Site

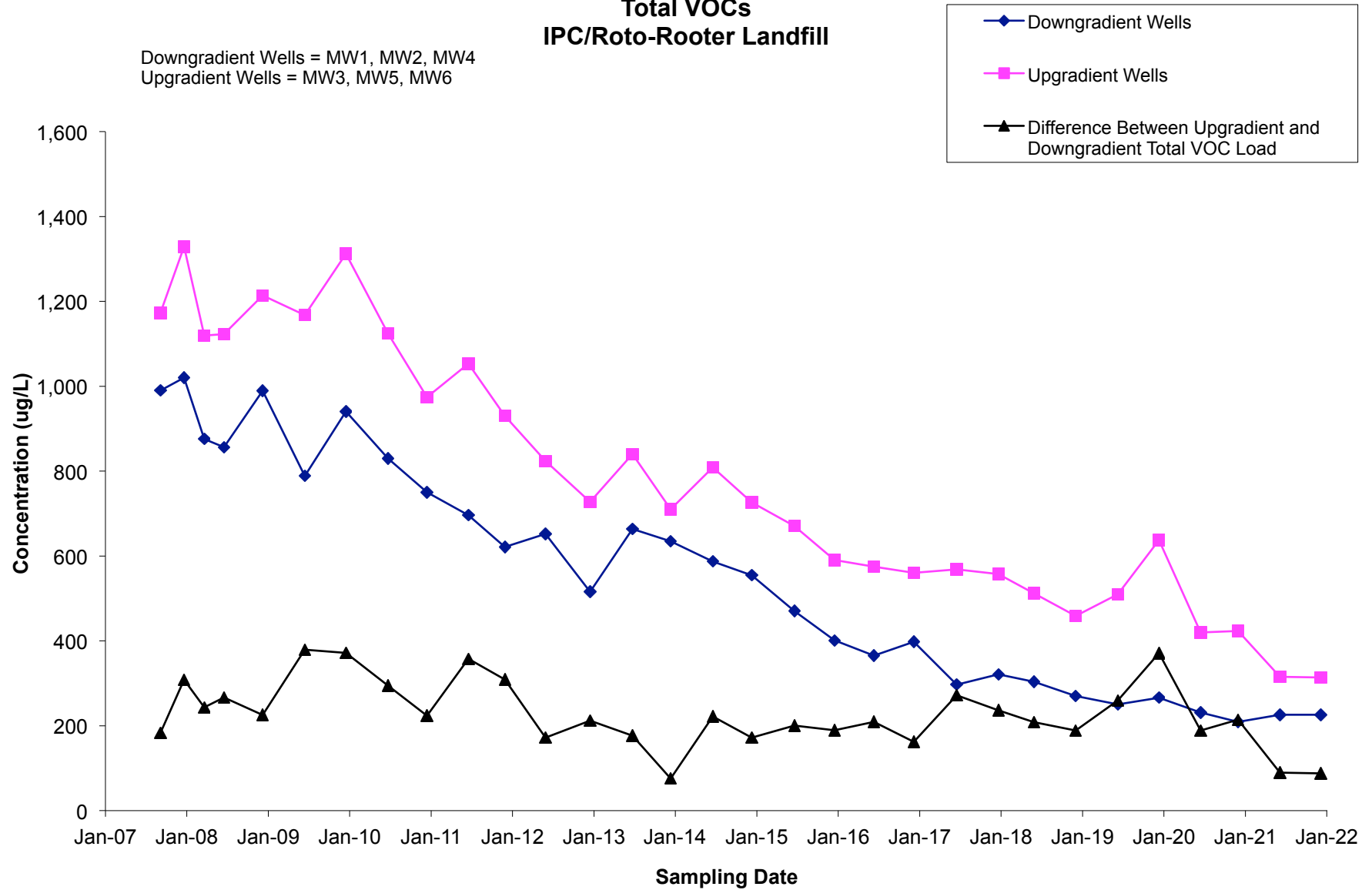
Parameter	Resample Date	Units	MW8	Qualifier	Field Duplicate	Qualifier	RPD
1,1-Dichloroethane	1/11/2022	ug/L	19		19		0%

Attachment 4

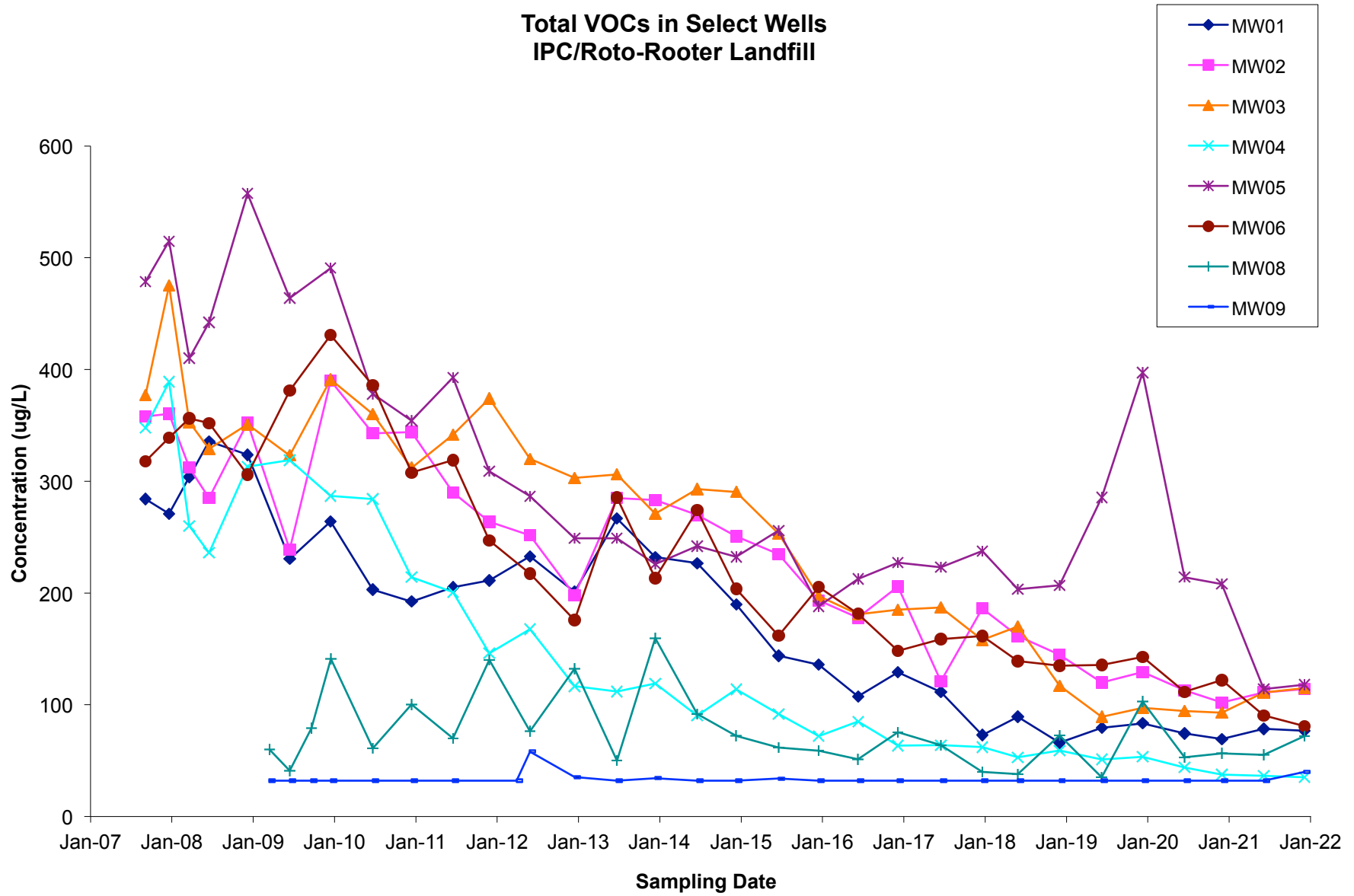
Total VOC Load Concentration Time Trends

Total VOCs IPC/Roto-Rooter Landfill

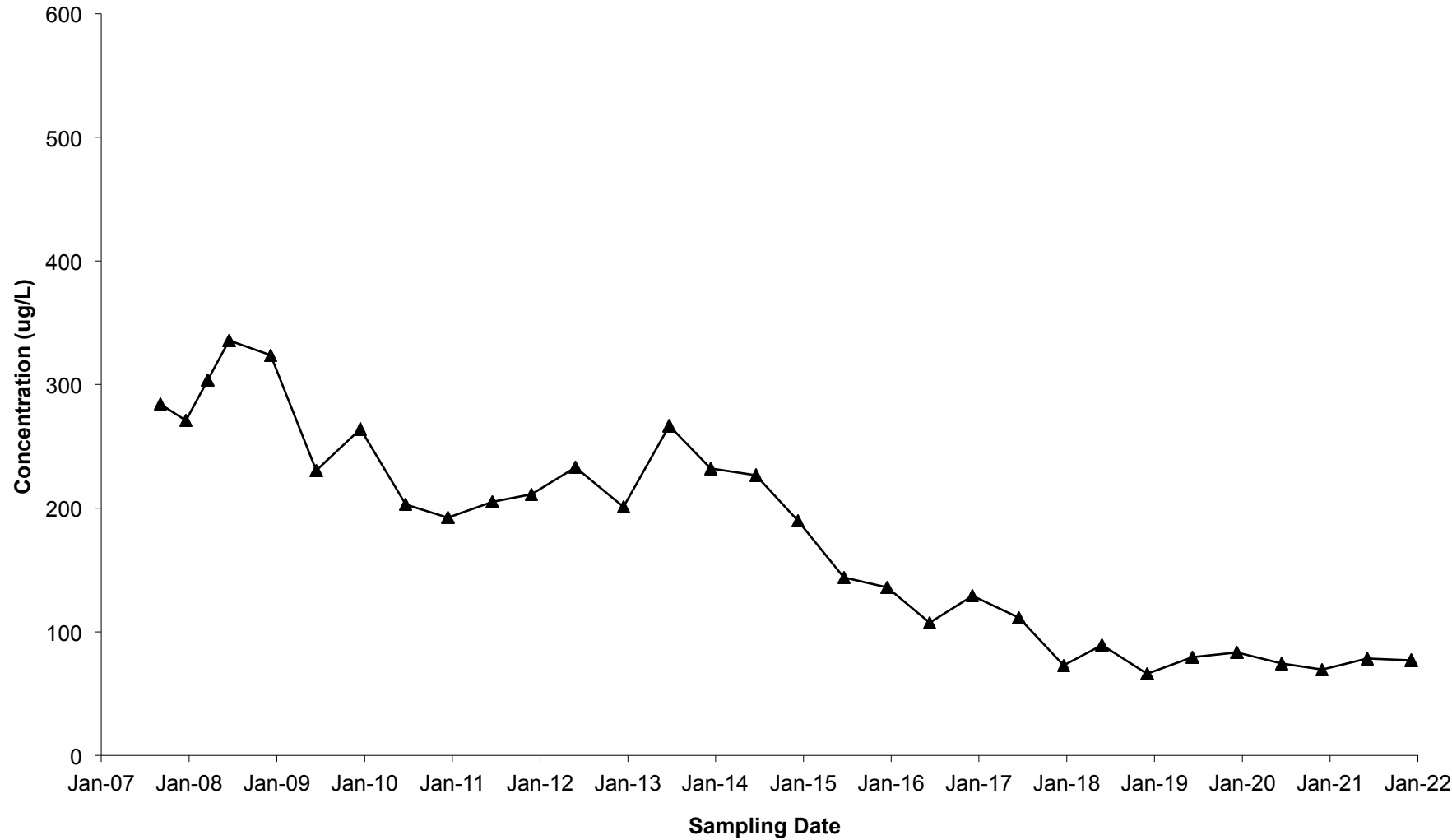
Downgradient Wells = MW1, MW2, MW4
Upgradient Wells = MW3, MW5, MW6



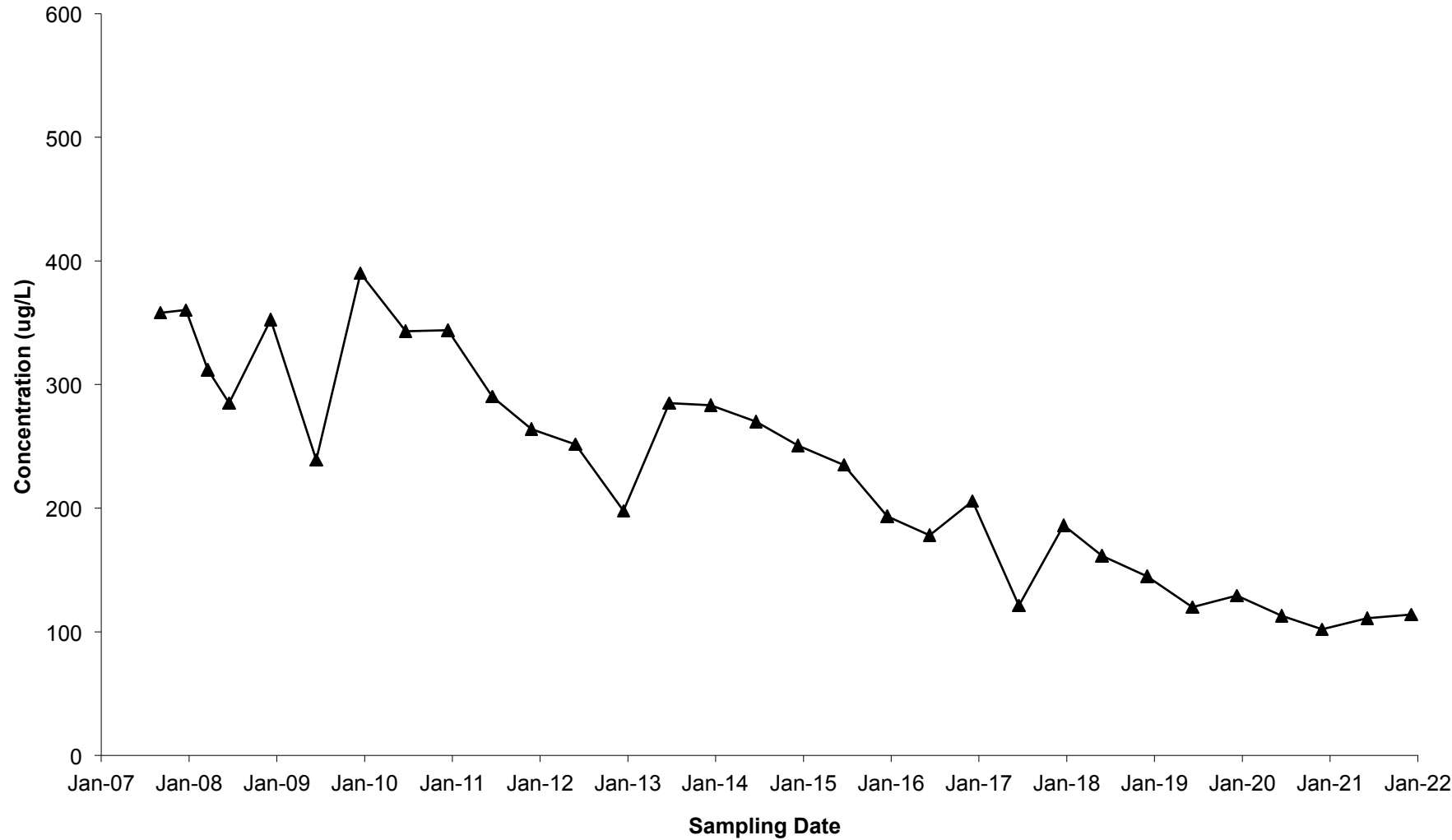
**Total VOCs in Select Wells
IPC/Roto-Rooter Landfill**



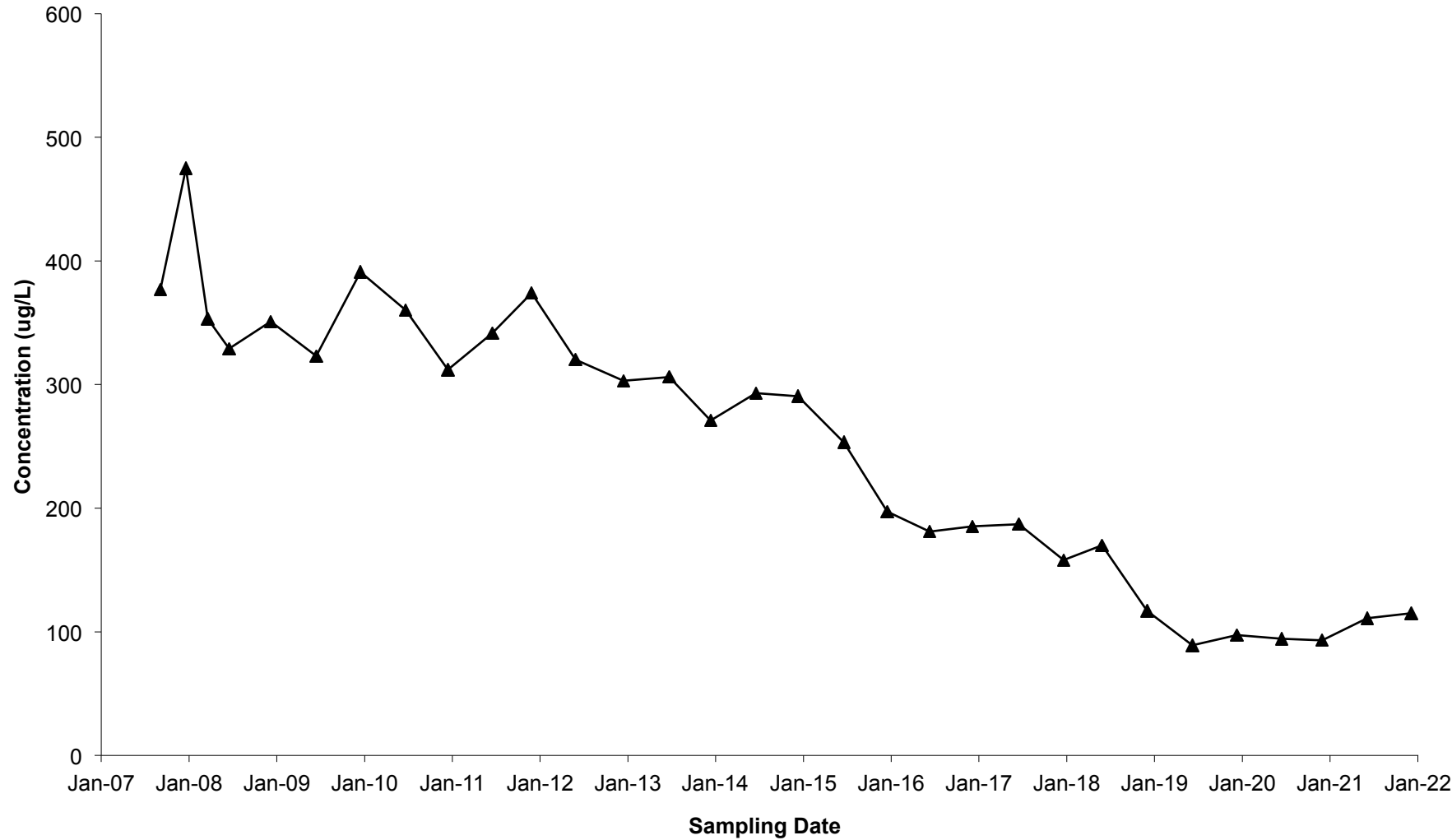
**Total VOCs in Well MW01
IPC/Roto-Rooter Landfill**



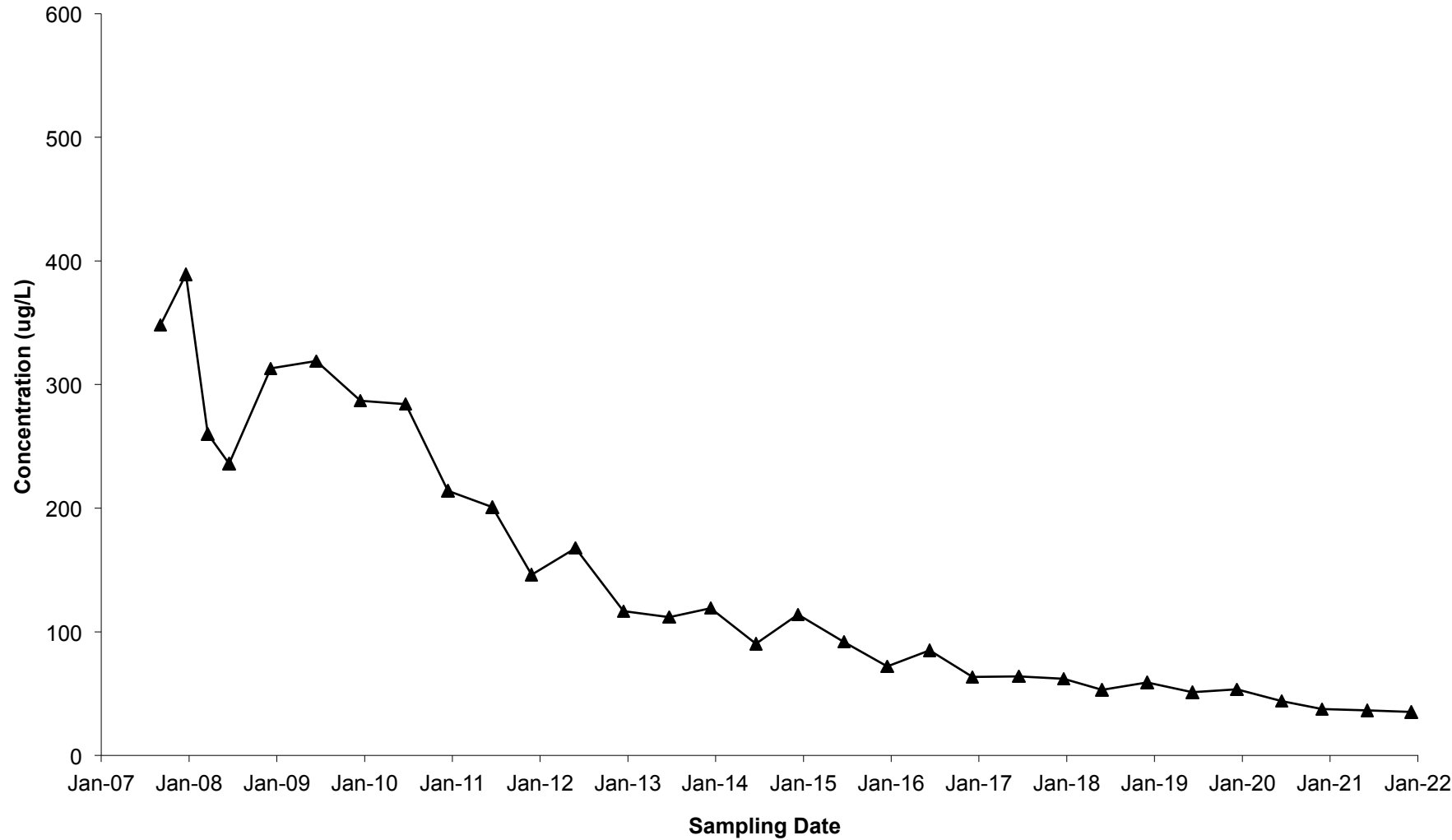
**Total VOCs in Well MW02
IPC/Roto-Rooter Landfill**



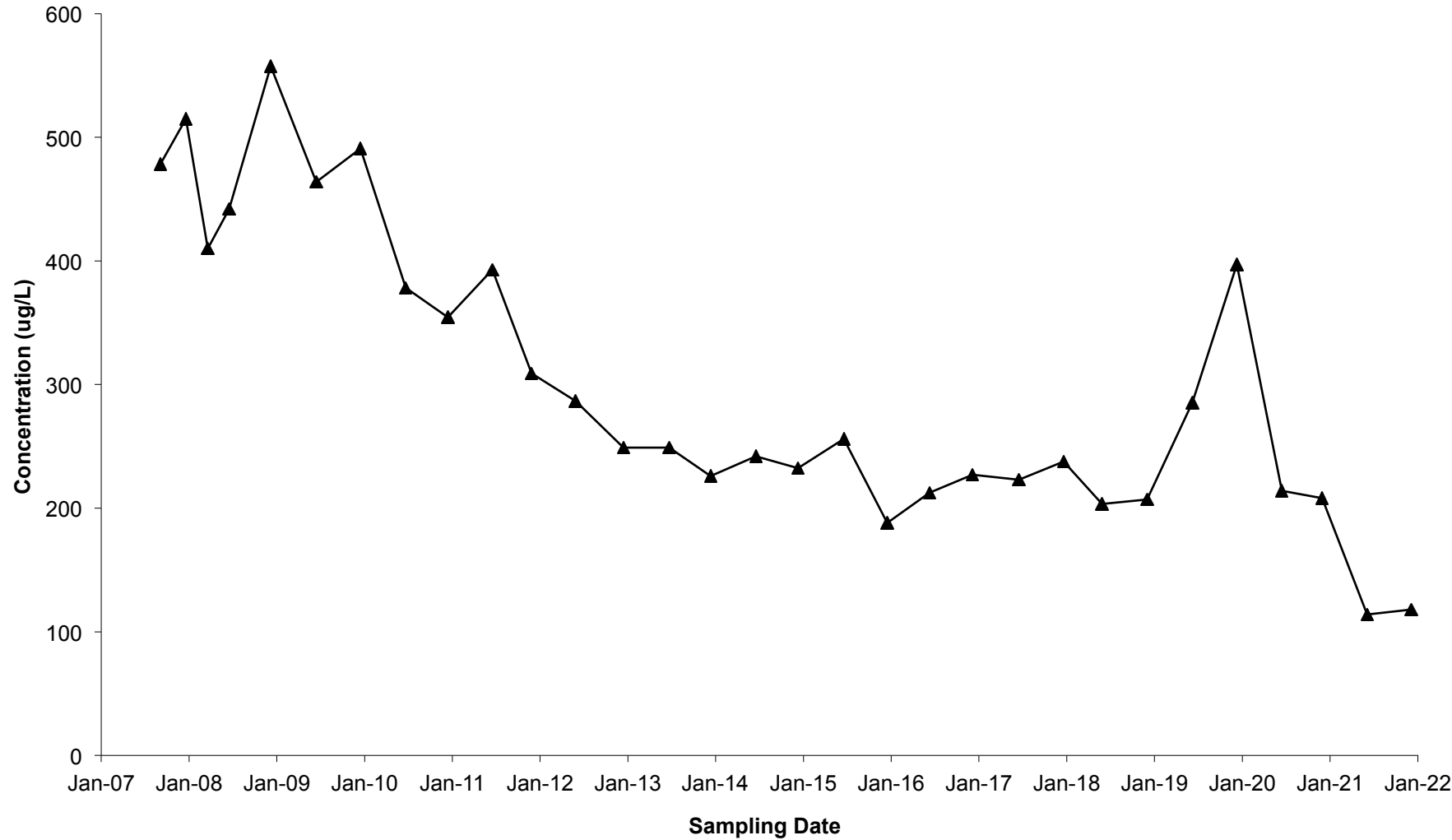
**Total VOCs in Well MW03
IPC/Roto-Rooter Landfill**



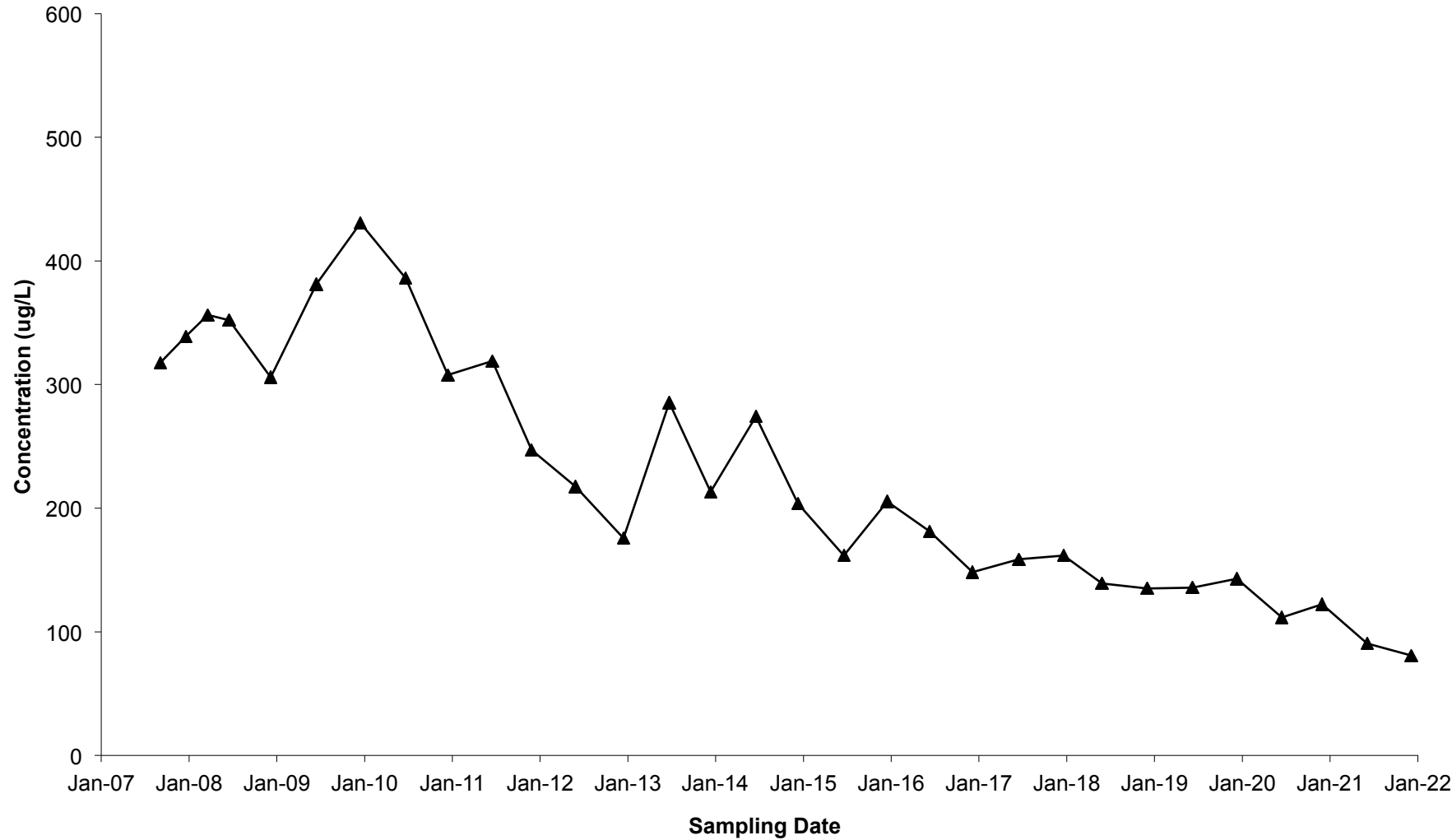
**Total VOCs in Well MW04
IPC/Roto-Rooter Landfill**



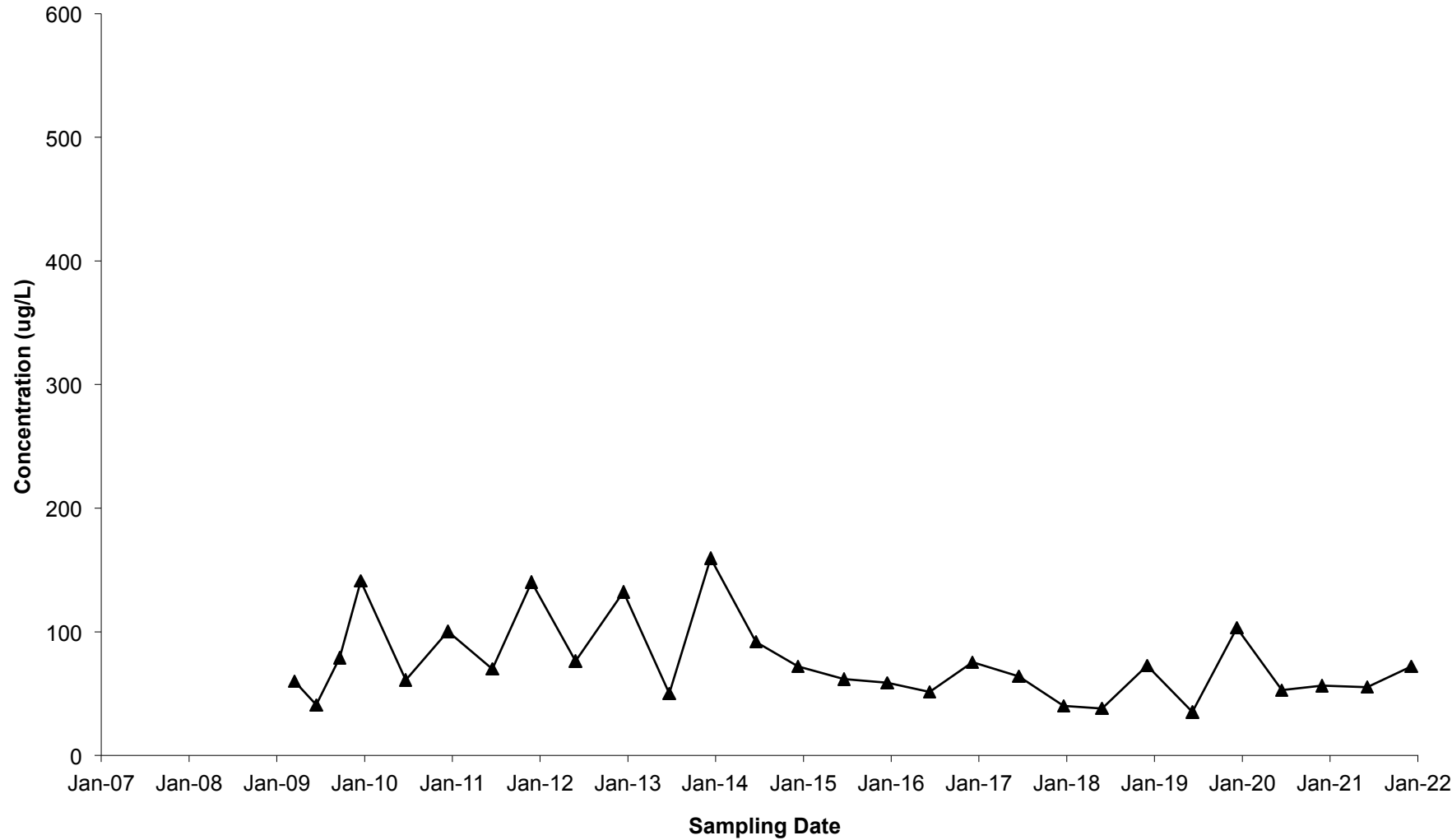
**Total VOCs in Well MW05
IPC/Roto-Rooter Landfill**



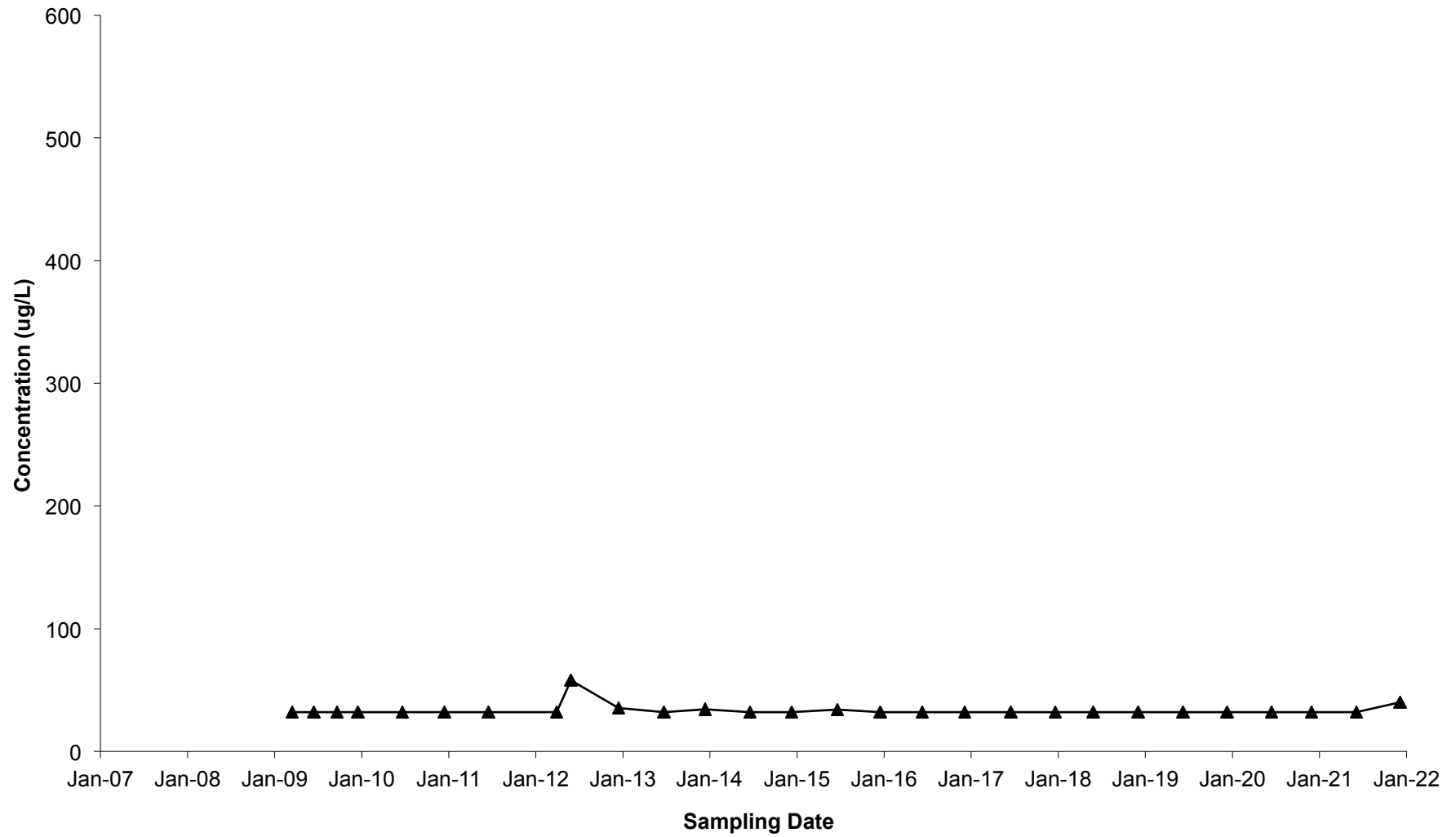
**Total VOCs in Well MW06
IPC/Roto-Rooter Landfill**



**Total VOCs in Well MW08
IPC/Roto-Rooter Landfill**



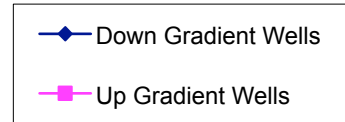
**Total VOCs in Well MW09
IPC/Roto-Rooter Landfill**



Attachment 5

Total VOC Load Trends (1,1,1-TCA plus TCE only)

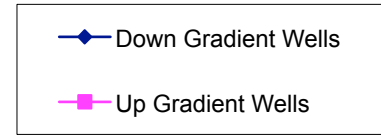
Total Trichloroethene + 1,1,1-Trichloroethane IPC/Roto-Rooter Landfill



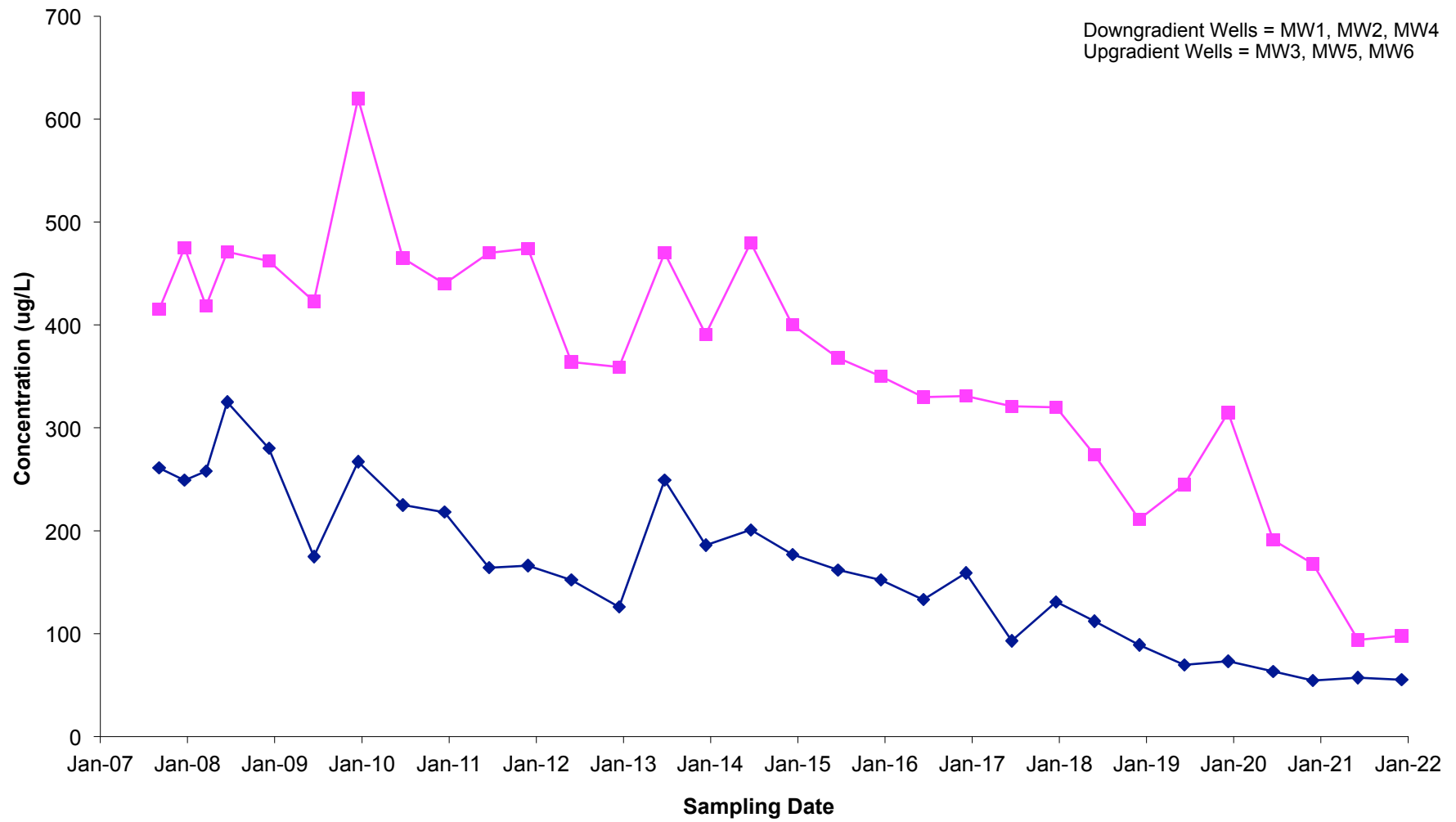
Downgradient Wells = MW1, MW2, MW4
Upgradient Wells = MW3, MW5, MW6



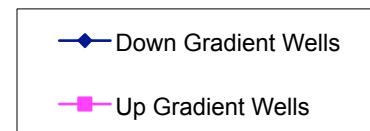
Total Trichloroethene IPC/Roto-Rooter Landfill



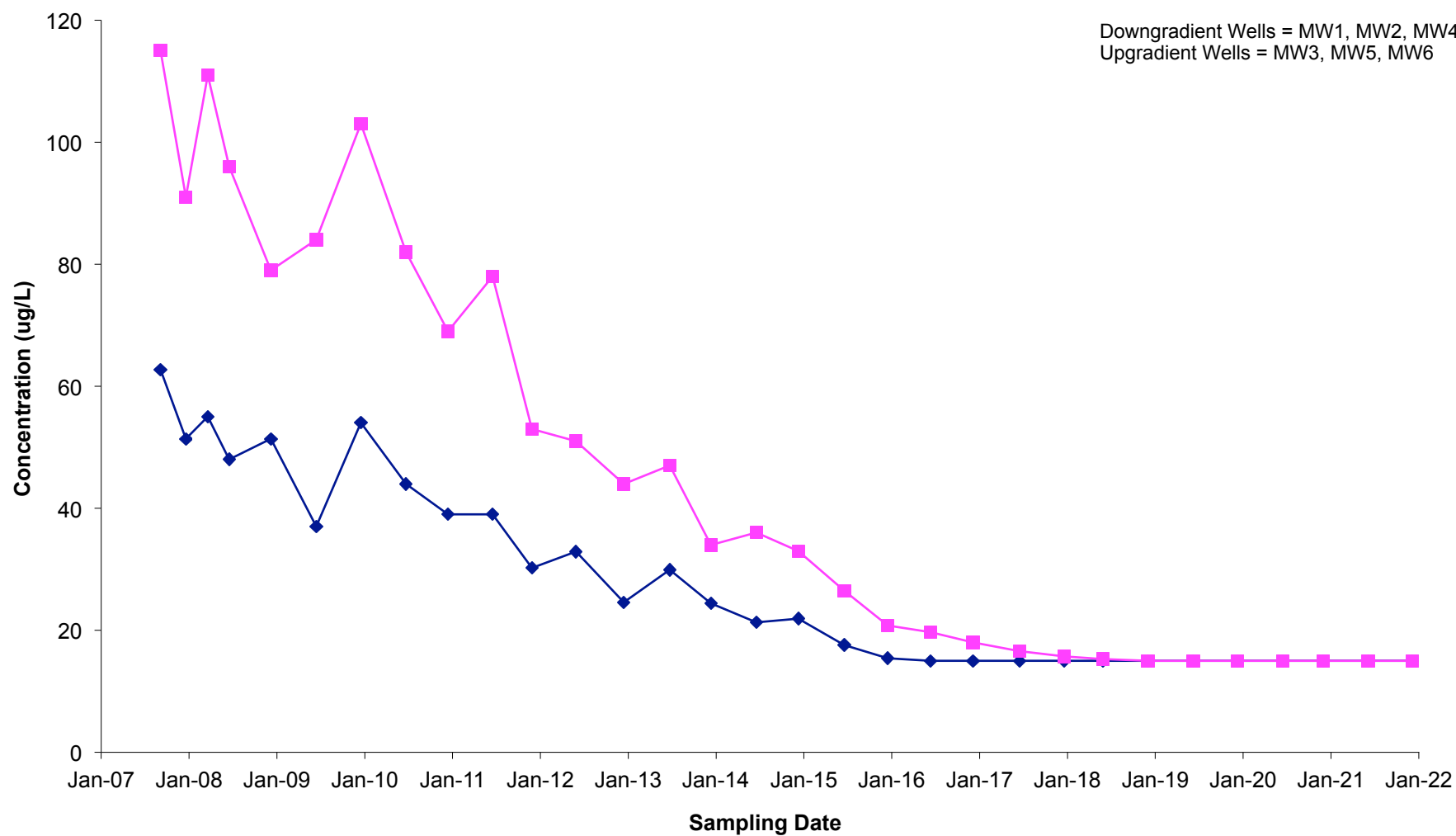
Downgradient Wells = MW1, MW2, MW4
Upgradient Wells = MW3, MW5, MW6



Total 1,1,1-Trichloroethane IPC/Roto-Rooter Landfill



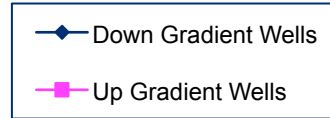
Downgradient Wells = MW1, MW2, MW4
Upgradient Wells = MW3, MW5, MW6



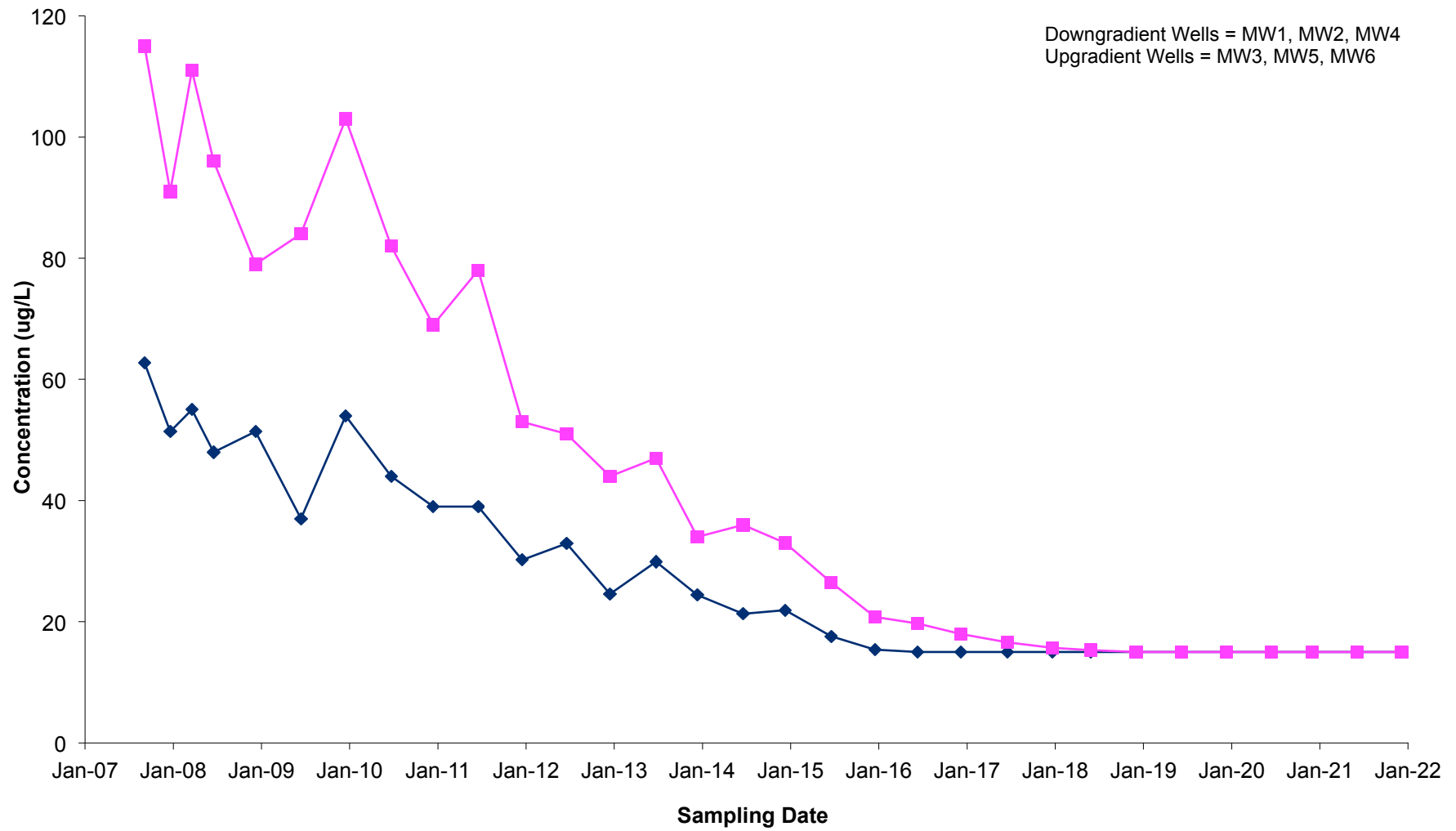
Attachment 6

Total VOC Load Trends (Individual COCs)

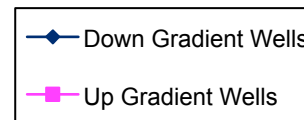
1,1,1-Trichloroethane IPC/Roto-Rooter Landfill



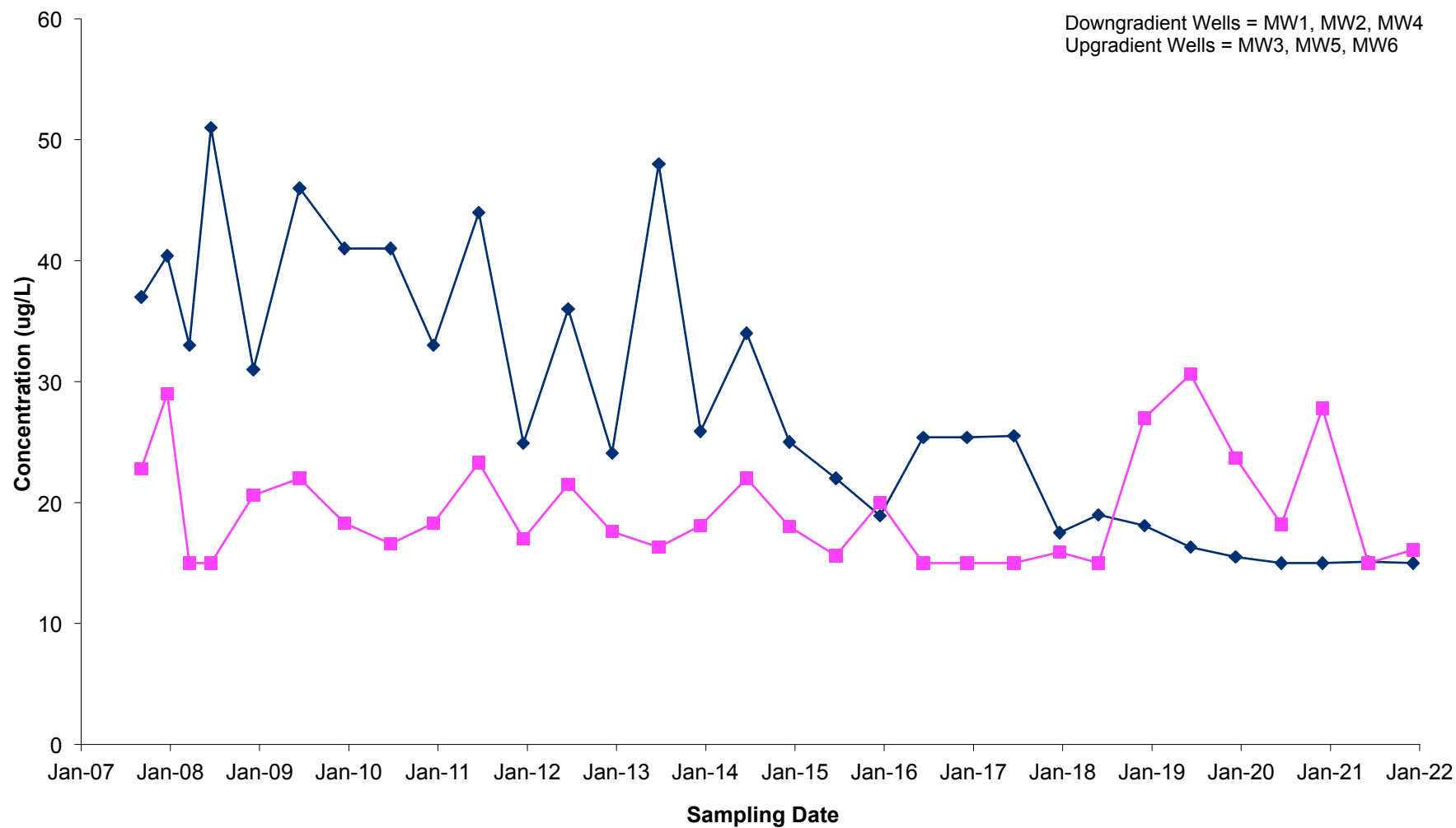
Downgradient Wells = MW1, MW2, MW4
Upgradient Wells = MW3, MW5, MW6



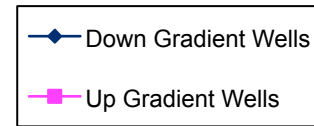
1,1-Dichloroethane IPC/Roto-Rooter Landfill



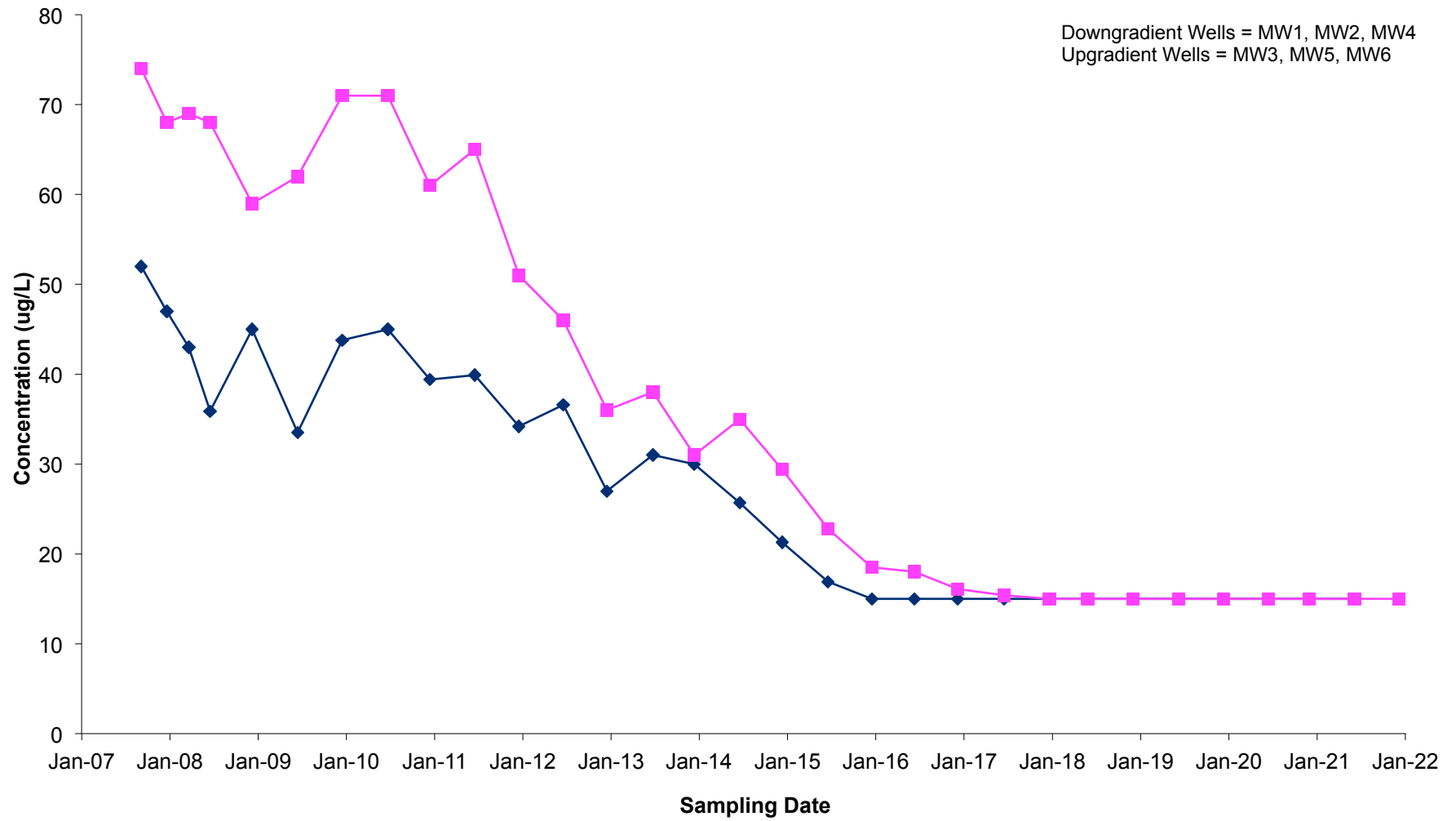
Downgradient Wells = MW1, MW2, MW4
Upgradient Wells = MW3, MW5, MW6



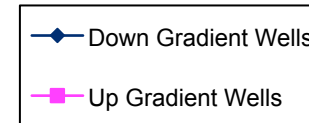
1,1-Dichloroethene IPC/Roto-Rooter Landfill



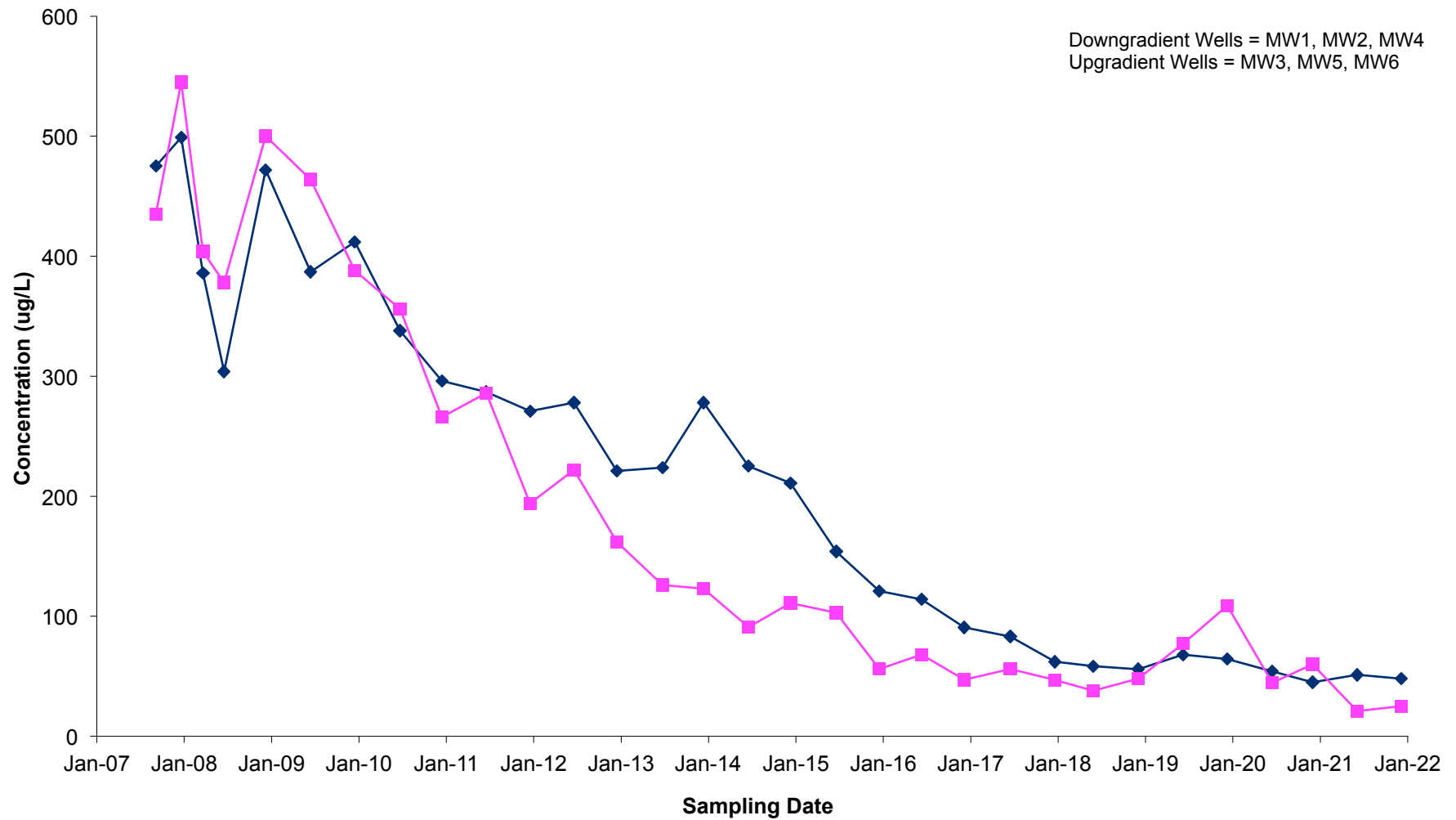
Downgradient Wells = MW1, MW2, MW4
Upgradient Wells = MW3, MW5, MW6



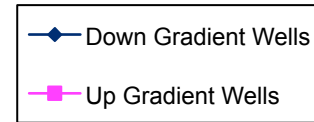
**cis-1,2-Dichloroethene
IPC/Roto-Rooter Landfill**



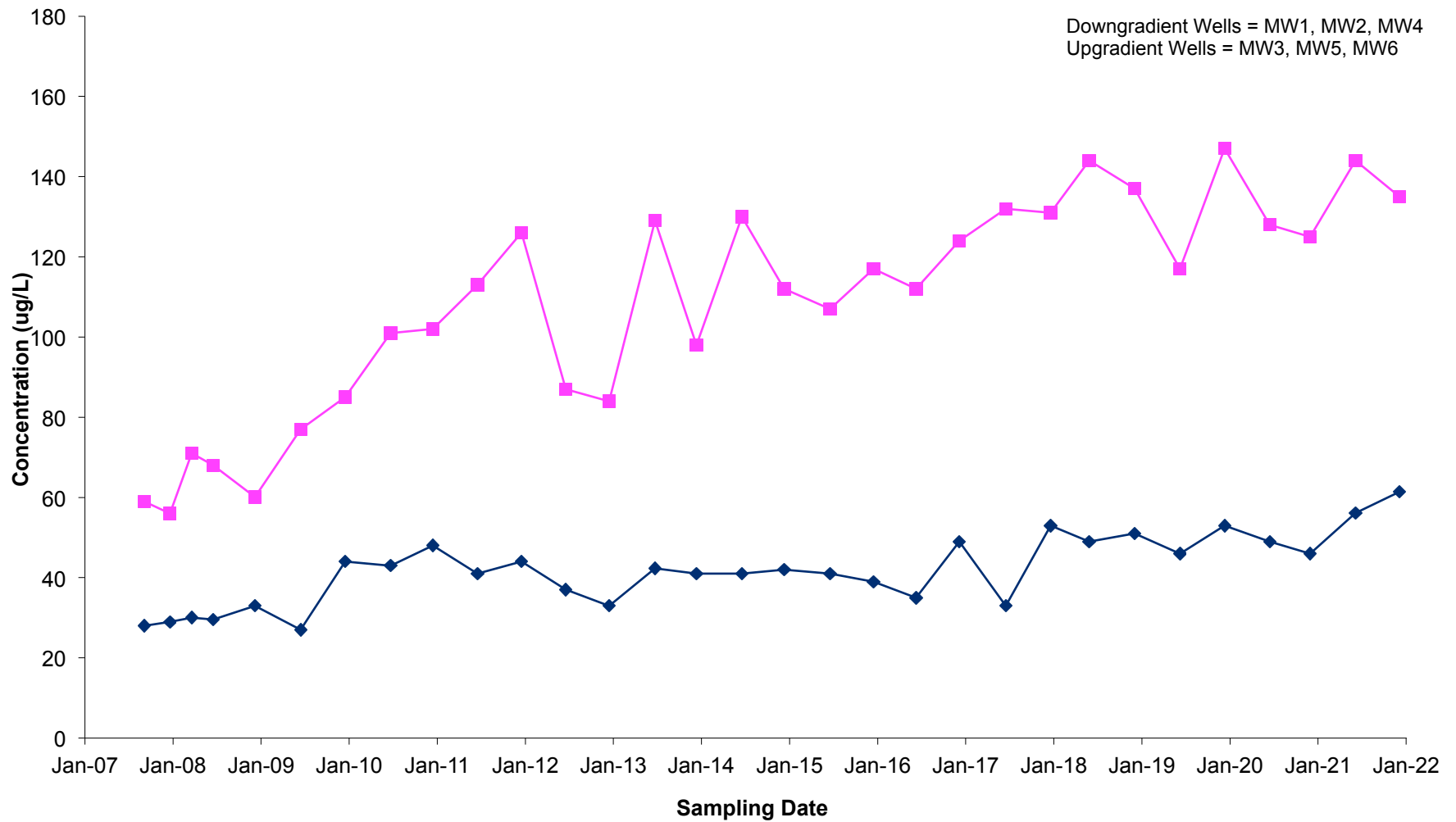
Downgradient Wells = MW1, MW2, MW4
Upgradient Wells = MW3, MW5, MW6



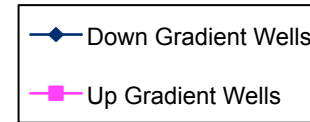
Tetrachloroethene IPC/Roto-Rooter Landfill



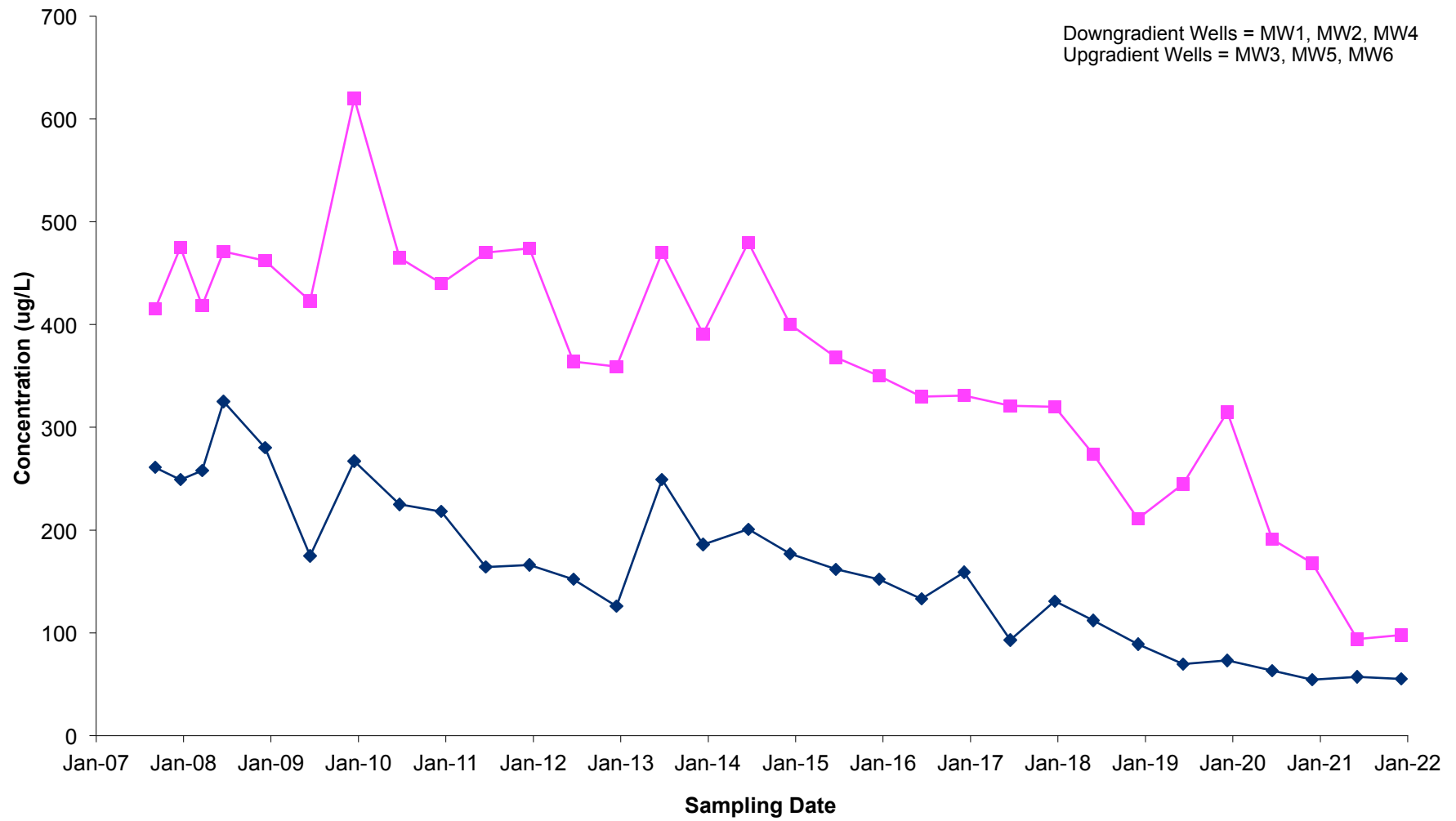
Downgradient Wells = MW1, MW2, MW4
Upgradient Wells = MW3, MW5, MW6



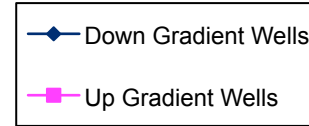
Trichloroethene IPC/Roto-Rooter Landfill



Downgradient Wells = MW1, MW2, MW4
Upgradient Wells = MW3, MW5, MW6



**Vinyl Chloride
IPC/Roto-Rooter Landfill**



Downgradient Wells = MW1, MW2, MW4
Upgradient Wells = MW3, MW5, MW6

